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TESTING FOR MECHANICAL PROPERTIES OF MONOLITHIC AND LAMINATED P--ETC(U)
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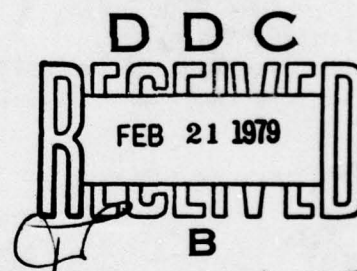
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**TESTING FOR MECHANICAL PROPERTIES OF MONOLITHIC
AND LAMINATED POLYCARBONATE MATERIALS, PART 2
TEST DATA**

F.E. GREENE
Douglas Aircraft Company
McDonnell Douglas Corporation
3855 Lakewood Boulevard
Long Beach, California 90846

OCTOBER 1978

TECHNICAL REPORT AFFDL-TR-77-96



Final Report For Period January 1976-October 1978

Approved for public release; distribution unlimited

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AIR FORCE WRIGHT AERONAUTICAL LABORATORIES
AIR FORCE SYSTEMS COMMAND
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433**

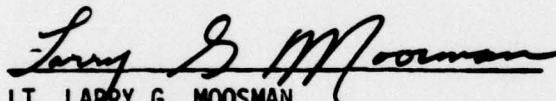
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This technical report has been reviewed and is approved for publication.



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FOR THE COMMANDER:



AMBROSE B. NUTT
Director
Vehicle Equipment Division

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18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) <div style="display: flex; justify-content: space-between;"> <div> True tensile stress-strain test curves Materials property computer program data output Specimen photographs Test measurement data </div> <div> Test Calculations Data Shear stress-strain test curves Compression stress-strain test curves </div> </div>		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report documents the test measurement and test calculations data, specimen photographs, and the material property program computer data outputs used for the development of mechanical properties data presented in Part 1 of this report.		

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19. KEY WORDS

polycarbonate
silicone
polyurethane

20. ABSTRACT

FOREWORD

This report is one of a series of reports that describes work performed by Douglas Aircraft Company, McDonnell Douglas Corporation, 3855 Lakewood Blvd., Long Beach, California 90846, under the Windshield Technology Demonstrator Program. This work was sponsored by the U.S. Air Force Flight Dynamics Laboratory, Wright-Patterson Air Force Base, under Contract F33615-75-C-3105, Project 2202/1926.

Lieutenant L. G. Moosman (AAF DL/FEW) was the Air Force Project Manager who monitored the program.

Mr. J. H. Lawrence, Jr., was the Program Director for the Douglas Aircraft Company. Mr. F. E. Greene, Structural Engineering, was the responsible engineer and author of this report.

The principal investigators and contributing authors were:

J. W. Kozmata - Material and Process Engineering

The author wishes to thank R. J. Reid, R. Lingle, K. L. DeVries, and A. H. Jones of Terra Tek, Inc., Salt Lake City, Utah for their timely efforts in performing high strain rate testing under contract to Douglas.

This report was first submitted to the Air Force in February 1978, and the time period covered by this report was from January 1976 through January 1978.

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DDC	Buff Section <input type="checkbox"/>
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INTRODUCTION

This volume (Part 2) includes the test measurement data, test calculation data, and the test stress-strain curves used to determine the design mechanical properties data presented in Part 1 of this report. This volume also includes photographs of the ruptured test specimens and the computer runs used to generate the design data presented in Part 1.

The tensile test stress-strain curves and calculated mechanical properties data are presented in Part 1 of this report as true stress-strain values. Test measurement data presented in this volume (Part 2) can be used to convert true stress-strain data to engineering stress-strain values by use of the ratio of the test specimen rupture area (A_r) to its initial area (A_0) as follows:

$$\text{Engineering stress} = \text{true stress} \times \frac{A_r}{A_0}$$

$$\text{Engineering strain} = \text{anti log true strain} \times \frac{A_r}{A_0}$$

For the conversion of average or design allowable values, the ratio must be the average value of the test specimen areas. Refer to Part I, Page 21 for a full discussion on true stress-strain relationships.

The design allowable mechanical properties data in Part I of this report is presented for a "B" or "C" statistical basis (refer Part I, page 28). Other design bases can be selected for the design data through the use of the computer data runs presented in this volume (Part 2). Other items of interest obtainable from the computer data run are:

- 1) The area under the average design curve. (a measure of toughness)
- 2) The location of points on the design stress-strain curve where the Kolmogorov-Smirnov check indicated a non-normal distribution.

- 3) The value of strain at reported yield stress.
- 4) The average and design allowable elastic modulus at several initial points on the stress-strain curve (a check for slope reversal).

Specimen photographs are presented for use in conjunction with test measurement data. Each figure contains all the specimens for each test condition noted in the test measurement data table. Items of interest that can be seen in photographs are as follows:

- 1) Plastic elongation and area of deformation for comparison of tensile and compression specimens at a specified test conditions. These comparisons can provide evidence of failure due to specimen imperfections within a test batch of material, and visual evidence of embrittlement from one material heat lot to another.
- 2) Delamination of fusion bonded tensile specimens. This evidence is indicative of poor material processing and/or material bond degradation due to service exposures and storage.
- 3) Cohesives and/or adhesive failure of laminated shear specimens for comparisons of materials and process methods.

The following test data are presented for use in conjunction with material property data presented in the following tables of Section IV (Part 1):

Table 1 (Part 1, Page 62)	
Test Stress-Strain Curves - Figures 61 through 63	6 - 10
Specimen Photographs - Figures 61 through 63	11 - 13
Computer Data Runs - Figures 61 through 63	14 - 16
Test Measurement Data - Tables 61 and 62	18 - 20

Table 2 (Part 1, Page 63)	
Test Stress-Strain Curves - Figures 64 through 66	21 - 23
Specimen Photographs - Figures 64 through 66	24 - 26
Computer Data Runs - Figures 64 through 66	27 - 29
Test Measurement Data - Tables 64 and 65	30 - 32

APPENDIX G **LOW STRAIN RATE** **TENSILE TEST DATA** **(SECTION IV, PART 1)**

Table 3 (Part 1, Page 64)	
Test Stress-Strain Curves - Figures 67 through 69	33 - 35
Specimen Photographs - Figures 67 through 69	36 - 38
Computer Data Runs - Figures 67 through 69	39 - 41
Test Measurement Data - Tables 67 and 68	42 - 44

Table 4 (Part 1, Page 65)	
Test Stress-Strain Curves - Figures 70 through 72	45 - 47
Specimen Photographs - Figures 70 through 72	48 - 50
Computer Data Runs - Figures 70 through 72	51 - 53

Notes: The service aging history for specimens 8254 is as follows:

- Canopy manufactured in June 1973 by Electrochemical Corp.
- Canopy coated with silver with Silvercoat 231
- Canopy installed on F-10, which was accepted on January 1974
- This is the date outdoor exposure began.
- Canopy removed from F-10 on September 15, 1975 due to coating degradation.
- Irradiated F-10 was approximately 100 hours
- Specimens cut from canopy and dated September 15, 1975

The following test data are presented for use in conjunction with materials property data presented in the following tables of Section IV (Part 1).

Table 7 (Part 1, Page 59)	PAGES
Test Stress-Strain Curves - Figures G1 through G6	5 - 10
Specimen Photographs - Figures G7 through G12	11 - 13
Computer Data Runs - Figures G13 through G18	14 - 19
Test Measurement Data - Tables G1 and G2	58 - 59

Table 8 (Part 1, Page 60)	
Test Stress-Strain Curves - Figures G19 through G24	20 - 25
Specimen Photographs - Figures G25 through G30	26 - 28
Computer Data Runs - Figures G31 through G36	29 - 34
Test Measurement Data - Tables G2 and G3.	59 - 60

Table 9 (Part 1, Page 61)	
Test Stress-Strain Curves - Figures G37 through G41	35 - 39
Specimen Photographs - Figures G42 through G46	40 - 42
Computer Data Runs - Figures G47 through G51	43 - 47
Test Measurement Data - Tables G4 and G5	61 - 62

Table 10 (Part 1, Page 63)	
Test Stress-Strain Curves - Figures G52 through G55	48 - 51
Specimen Photographs - Figures G56 through G59	52 - 53
Computer Data Runs - Figures G60 through G63	54 - 57

Note: The service aging history for specimen B25A is as follows:

- o Canopy manufactured in June 1973 by Sierracin/Sylmar Corp.
- o Canopy coated both sides with Sierracote 233
- o Canopy installed on F-10, which was accepted on January 1974.
This is the date outdoor exposure began.
- o Canopy removed from F-10 on September 22, 1975 due to coating degradation.
- o Accumulated flight time was approximately 265 hours.
- o Specimens cut from canopy and tested September 15, 1977.

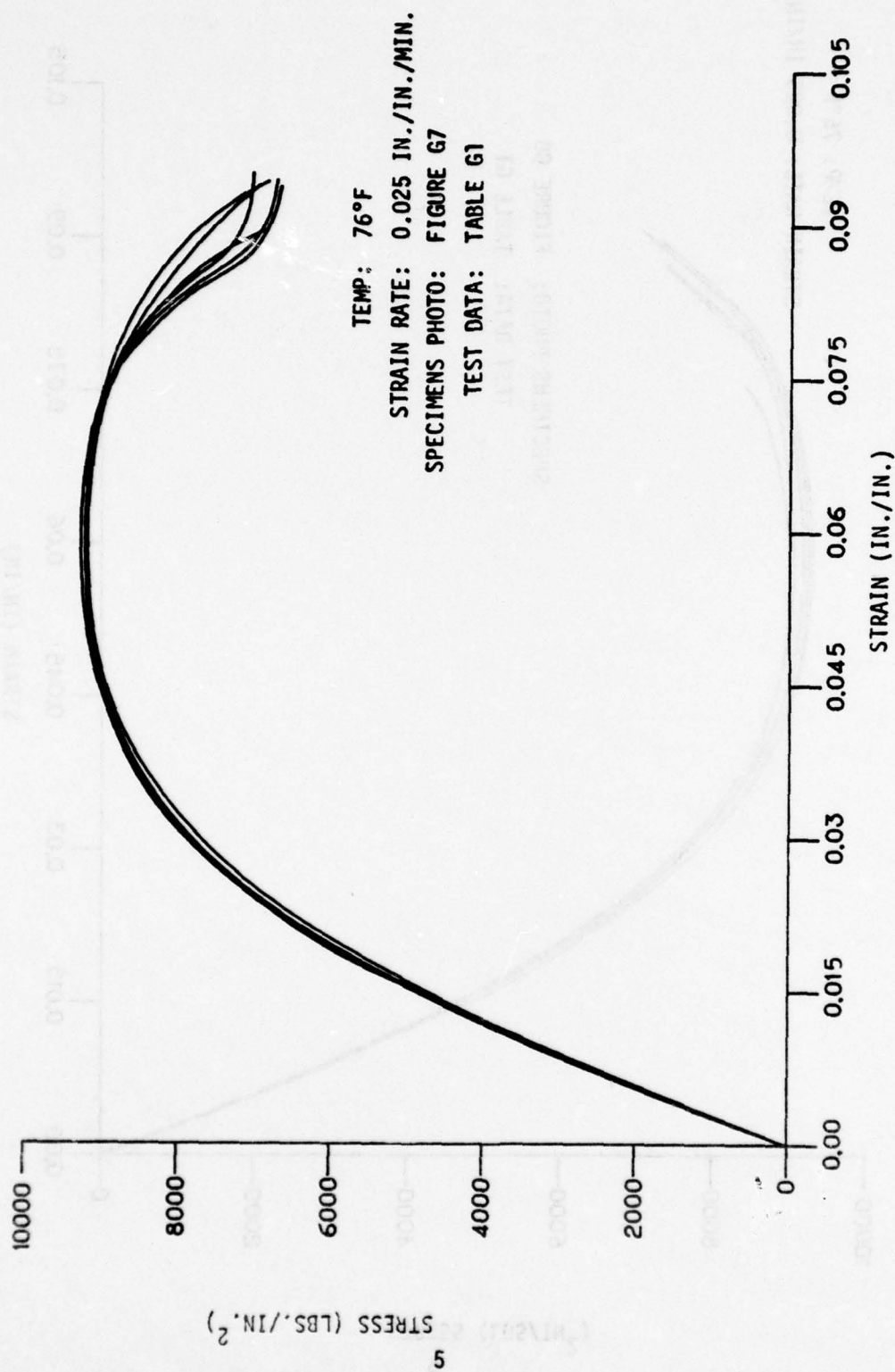


Figure G1 Tensile Test Curves (DAC503B1 - 0.25 Polycarbonate).

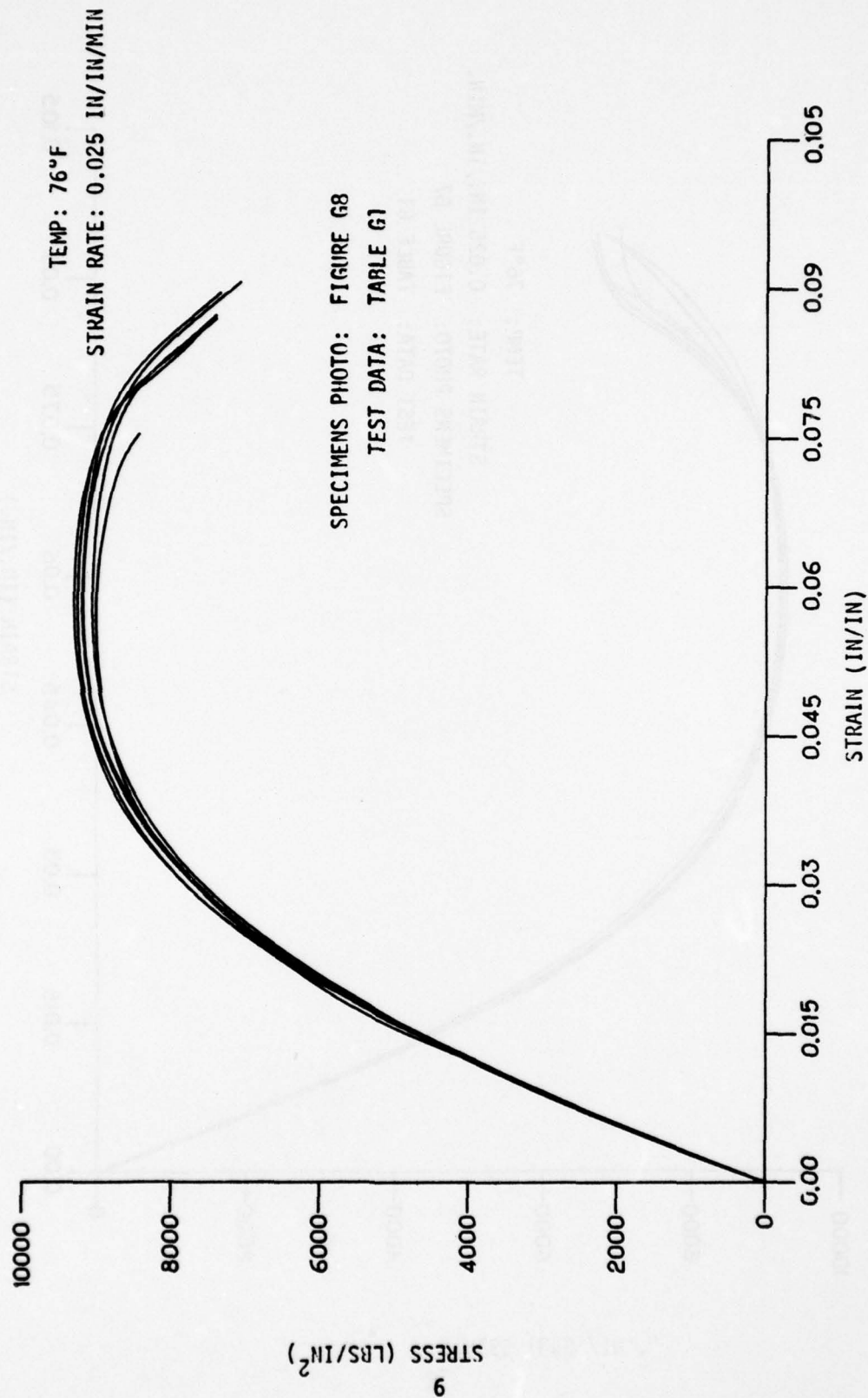


Figure G2. Tensile Test Curves (DAC503B2-0.25 Polycarbonate).

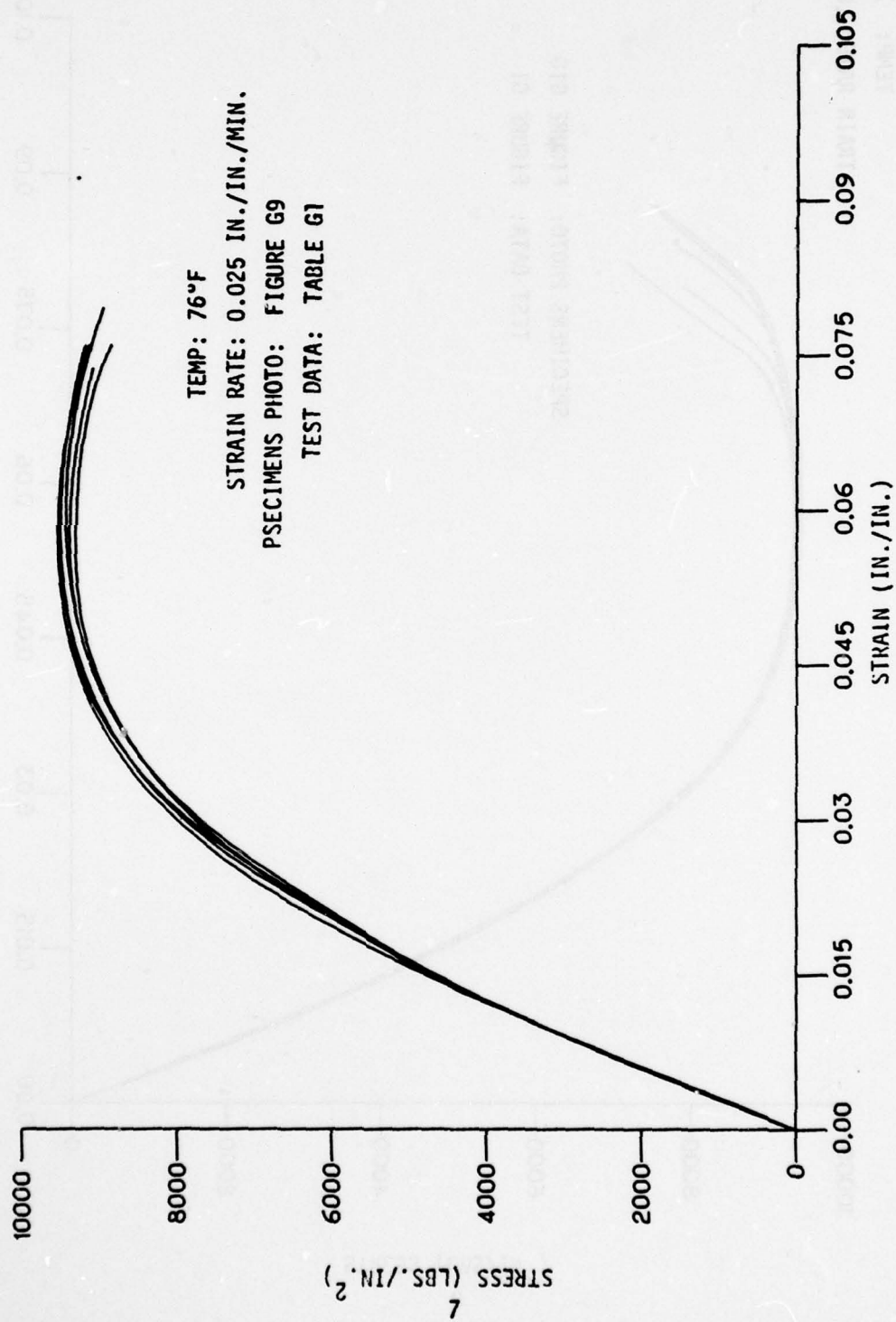


Figure G3. Tensile Test Curves (DAC503B3-0.25 Polycarbonate).

TEMP: 75°F
STRAIN RATE: 0.025 IN/IN/MIN

SPECIMENS PHOTO: FIGURE G10

TEST DATA: FIGURE G1

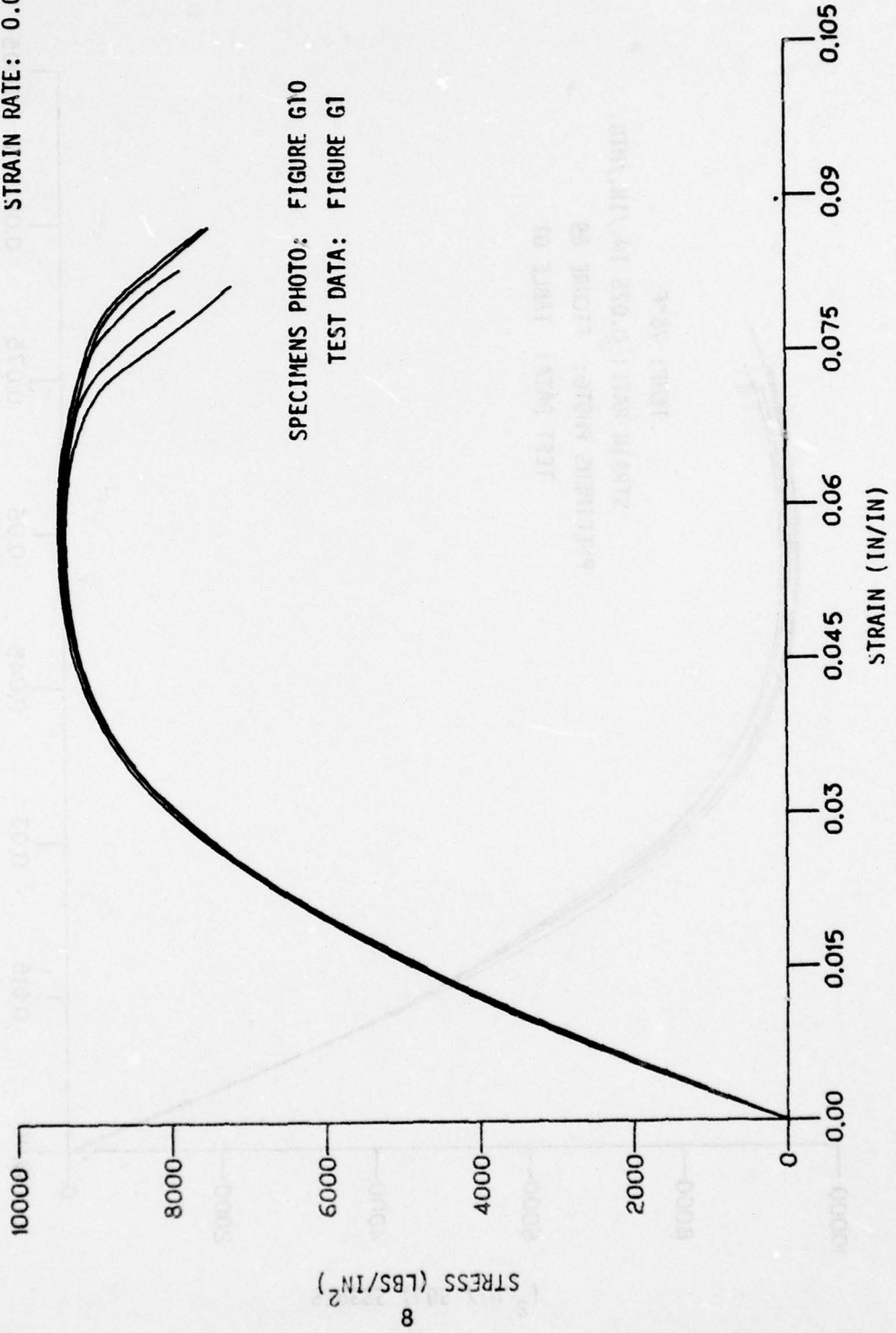


Figure G4. Tensile Test Curves (DAC503B4-0.25 Polycarbonate).

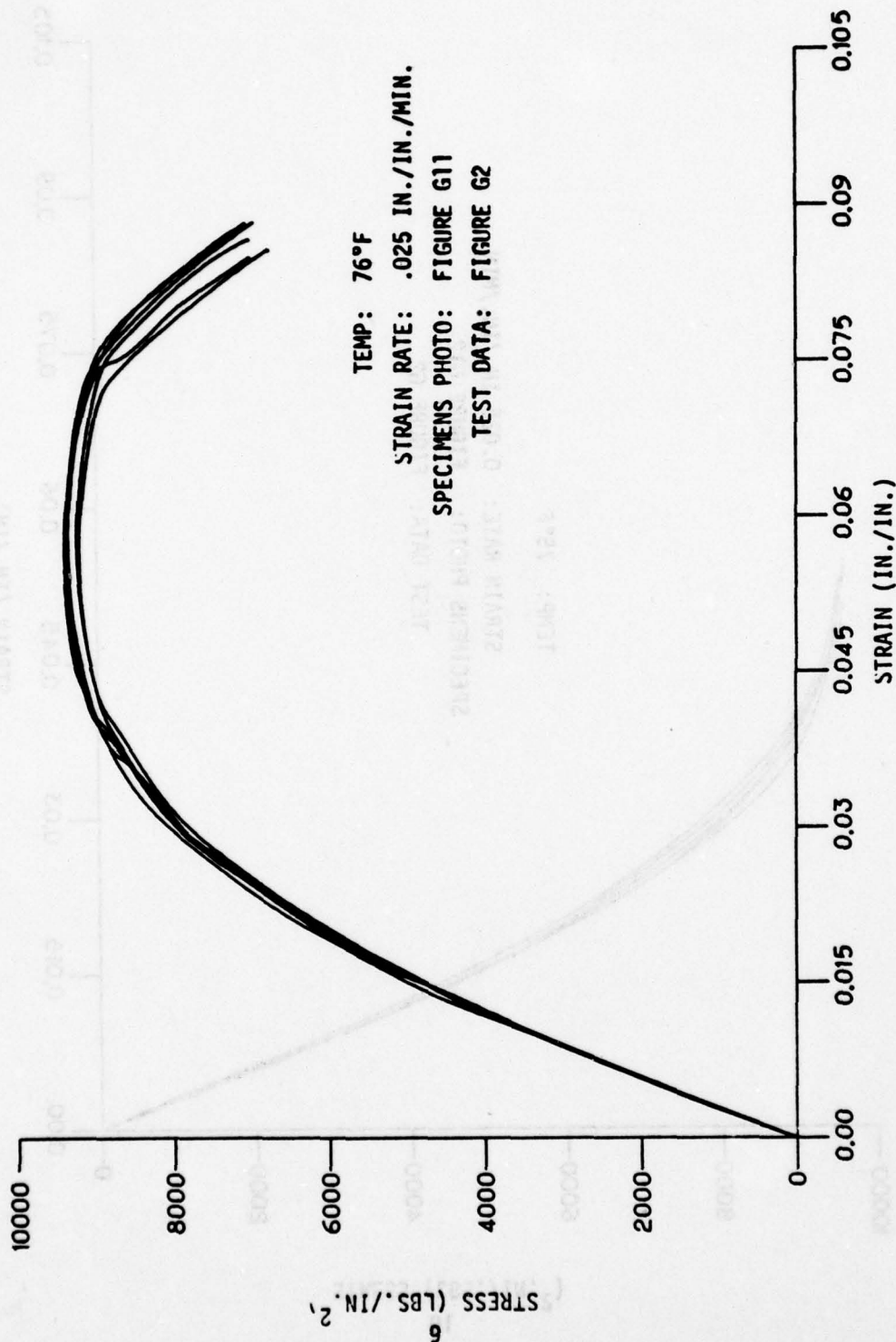


Figure G5. Tensile Test Curves (DAC503B5-0.25 Polycarbonate).

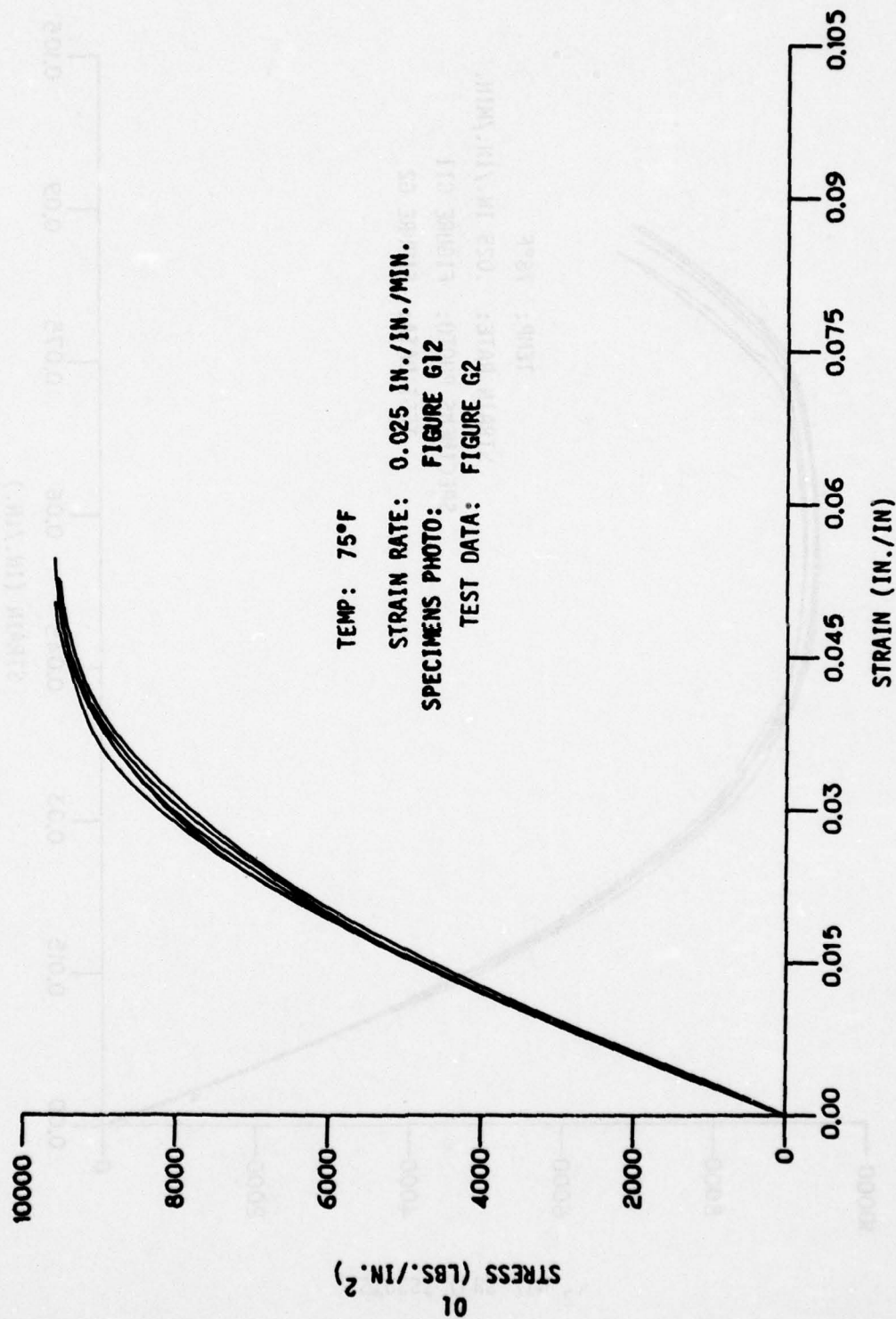


Figure G6. Tensile Test Curves (DAC503B6-0.25 Polycarbonate).

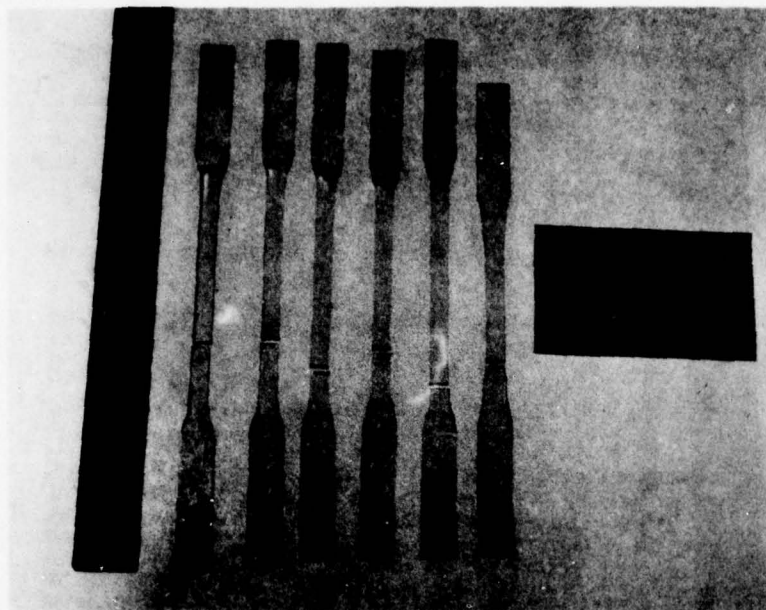


Figure 67.

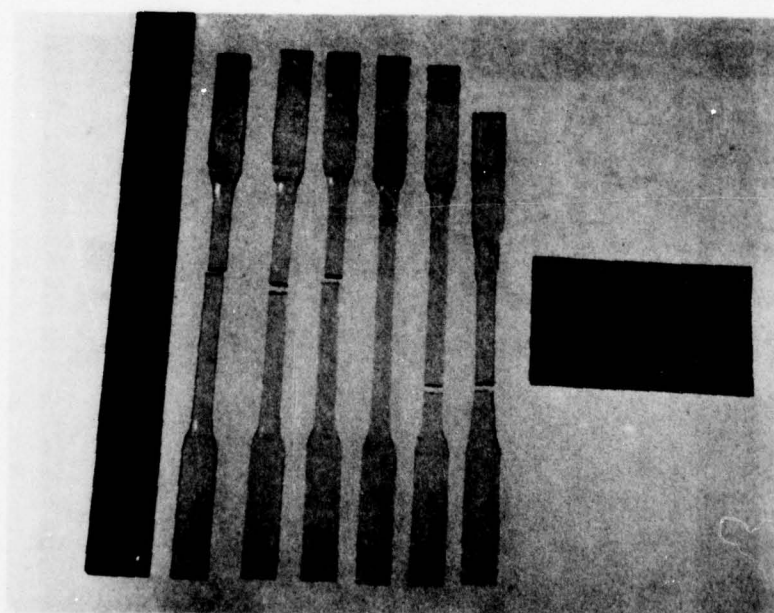


Figure 68.

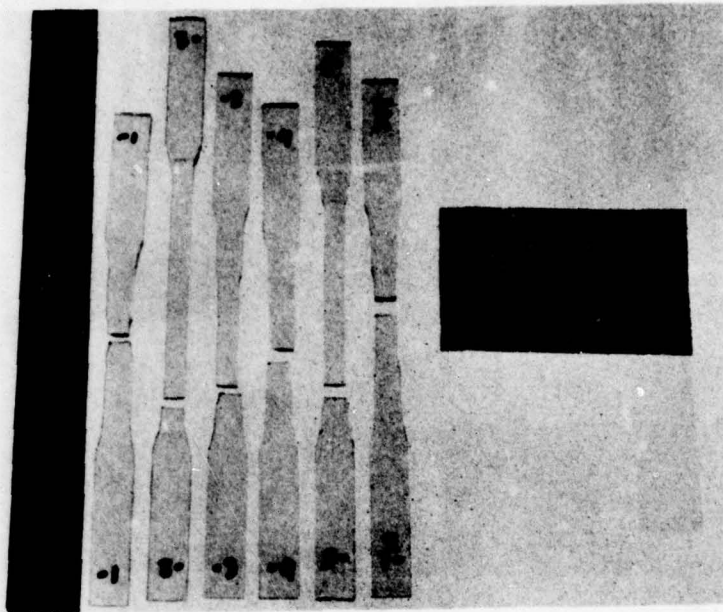


Figure 69.

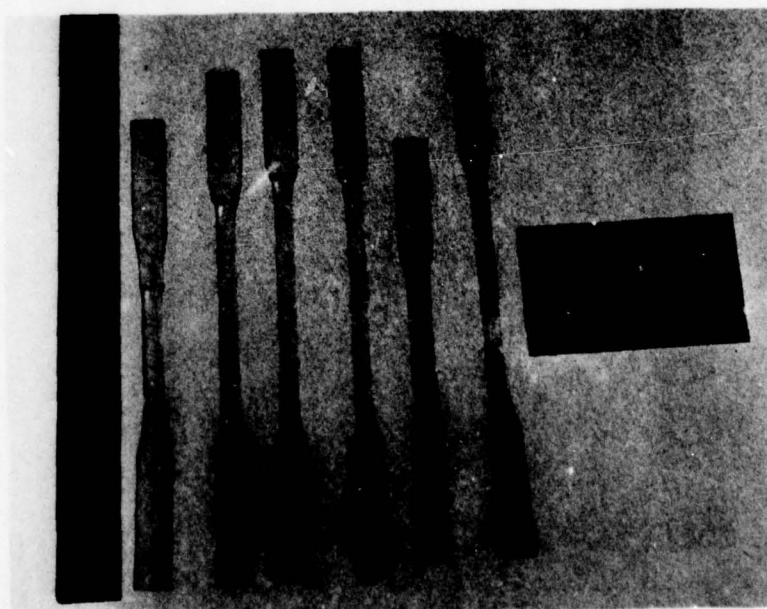


Figure 610.

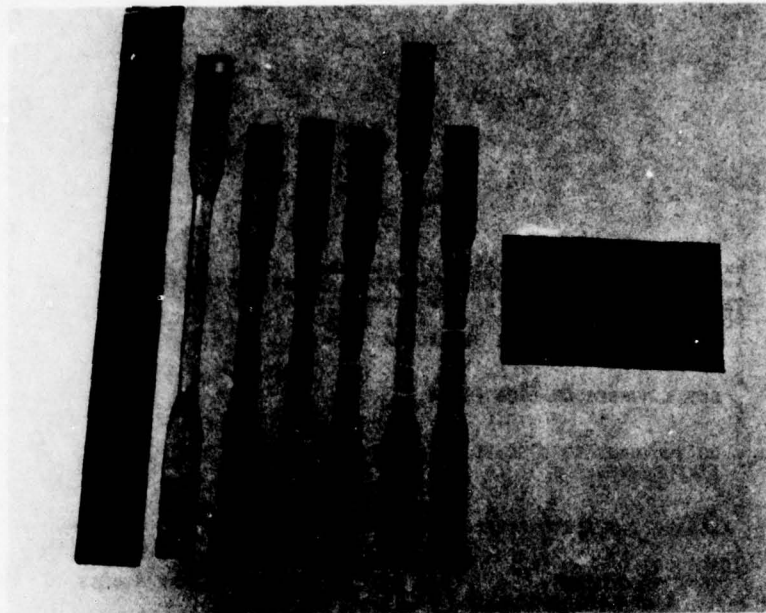


Figure G11.

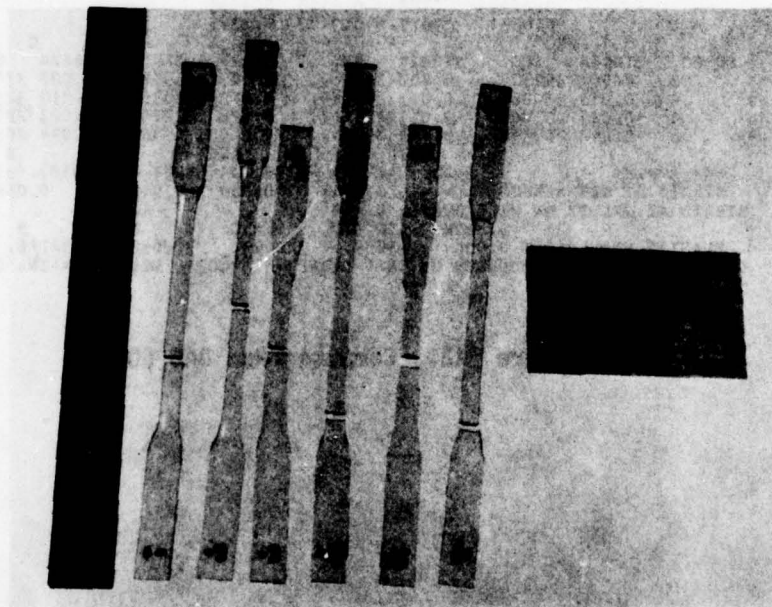


Figure G12.

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ex elat(stsstr) 'd1(dac503b1) 1(tekssc)'
*** LOAD MODULE RELOCATION FACTOR = 0AF618 *****
TEKSSC,CHG 208, 2-16-78; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=2
?
2
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
1 DAC503B1-1          9218.      0.057
2 DAC503B1-2          9200.      0.059
3 DAC503B1-3          9204.      0.059
4 DAC503B1-4          9229.      0.059
5 DAC503B1-5          9291.      0.059
6 DAC503B1-1S        9287.      0.059
STRAIN AT FRACTURE POINT IS NOT NORMAL
STRAIN AT FRACTURE POINT IS NOT NORMAL
MAX STRAIN ON CURVE 3 OF 6= 0.095
NOT NORMAL      STRAIN      SSTRSS      DCRIT      DCAC      7 1.000 0.0
0.0247          7044.      0.3190      0.3501
0.0261          7289.      0.3190      0.3683
0.0277          7527.      0.3190      0.3706
0.0294          7758.      0.3190      0.3599
0.0311          7979.      0.3190      0.3395
AVG      A      B      C
PC NO.  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC
2 0.007 349509. 0.007 310589. 0.007 326397. 0.007 334939.
4 0.013 330263. 0.013 311355. 0.013 319035. 0.013 323185.
6 0.023 291069. 0.023 276267. 0.023 282279. 0.023 285528.
8 0.044 205488. 0.044 200942. 0.044 202786. 0.044 203786.
STD DEV      AVG      A      B      C
MAX STRESS      = 40.655 9238.211 9011.461 9107.953 9157.459
STRAIN AT MAX STRESS = 0.001 0.059 0.054 0.056 0.057
STRAIN AT 2ND PT ON BASE CURVE= 0.004
STRAIN      STD DEV      AVG      A      B      C
ELASTIC MODULUS AT 0.004 5854. 346043. 323638. 332738. 337656.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 346034. DELTA STRAIN= 0.0000

```

Figure G13. Computer Run DAC 503B1

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ex clst(stsstr) 'd1(dac503b2) d1(eksac)'
**** LOAD MODULE RELOCATION FACTOR = 000560 *****
TEKSSC,CHG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
  SHEAR=1,COMP=2,SHORT TENSION=2
?
2
  ENTER NUMBER OF DATA FILES
?
1
  DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
  (1=YES,2=NO)
?
2
  X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
  TEST SPECIMENS-
    1 DAC503B2-1      MAX STRESS      STRAIN AT MAX STRESS
    2 DAC503B2:2      9181.      0.050
    3 DAC503B2-3      9193.      0.050
    4 DAC503B2-4      9303.      0.050
    5 DAC503B2-5      9255.      0.050
    6 DAC503B2-5      9059.      0.050
    7 DAC503B2X-1     9086.      0.057
  MAX STRAIN ON CURVE 1 OF 6= 0.091
  NOT NORMAL STRAIN SSTRESS DCRT DCAC 6 1.000 0.0
    0.0161 4951. 0.3190 0.3365
    AVG A B C
  PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
    2 0.004 344408. 0.004 308344. 0.004 322992. 0.004 330907.
    4 0.011 326015. 0.011 308294. 0.011 315017. 0.011 319002.
    6 0.017 304003. 0.017 276596. 0.017 280005. 0.017 294293.
    8 0.026 272577. 0.026 255010. 0.026 262150. 0.026 266004.
    STD DEV AVG A B C
  MAX STRESS = 113.723 9166.210 8591.606 8023.776 8950.136
  STRAIN AT MAX STRESS = 0.001 0.050 0.055 0.056 0.057
  STRAIN AT 2ND PT ON BASE CURVE= 0.000
    STRAIN STD DEV AVG A B C
  ELASTIC MODULUS AT 0.000 12439. 354944. 294996. 319345. 332502.
  CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 354959. DELTA STRAIN= 0.0001

```

Figure G14. Computer Run DAC503B2

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ex clst(stastr) 'd1(dac503b3) 1(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF618 *****
TEKSSC,CHG 20B, 2-16-78; J.F.DURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=2
?
2
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS-
1 DAC503B3-1 MAX STRESS STRAIN AT MAX STRESS
2 DAC503B3-2 9393. 0.057
3 DAC503B3-3 9441. 0.059
4 DAC503B3-4 9315. 0.056
5 DAC503B3-5 9545. 0.057
6 DAC503B3-6 9512. 0.058
7 FAC503B3K-1 9520. 0.057
MAX STRAIN ON CURVE 2 OF 6= 0.079
NOT NORMAL STRAIN SSTRESS DCRIT DCAC 5 1.000 0.0
0.0175 5312. 0.3190 0.3332
AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.007 333585. 0.007 317574. 0.007 324077. 0.007 327591.
4 0.013 321524. 0.013 307002. 0.013 312900. 0.013 316088.
6 0.032 255320. 0.032 237790. 0.032 244910. 0.032 248758.
8 0.046 199444. 0.046 189032. 0.046 193261. 0.046 195546.
STD DEV AVG A B C
MAX STRESS = 88.474 9453.812 8969.435 9177.702 9281.514
STRAIN AT MAX STRESS = 0.001 0.057 0.052 0.054 0.055
STRAIN AT 2ND PT ON BASE CURVE= 0.004
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.004 6093. 338194. 333205. 335232. 336327.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 338214. DELTA STRAIN= 0.0000

```

Figure G15. Computer Run DAC503B3

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ex clst(stsstr) 'd1(dac503b4) 1(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 *****
TEKSSC,CHG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
  SHEAR=1,COMP=2,SHORT TENSION=2
?
2
? ENTER NUMBER OF DATA FILES
?
1
? DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
  (1=YES,2=NO)
?
2
? X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
  TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
    1 DAC503B4-1      9444.      0.058
    2 DAC503B4-2      9377.      0.057
    3 DAC503B4-3      9348.      0.057
    4 DAC503B4-4      9392.      0.057
    5 DAC503B4X-1      9415.      0.057
  STRAIN AT FRACTURE POINT IS NOT NORMAL
MAX STRAIN ON CURVE 4 OF 5= 0.087
    AVG      A      B      C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
    2  0.003 346528. 0.003 278857. 0.003 306369. 0.003 321185.
    4  0.010 333810. 0.010 297915. 0.010 312508. 0.010 320367.
    6  0.015 318450. 0.015 297854. 0.015 306227. 0.015 310737.
    8  0.021 297688. 0.021 287268. 0.021 291504. 0.021 293786.
      STD DEV      AVG      A      B      C
MAX STRESS      = 36.517 9395.478 9186.432 9271.613 9317.349
STRAIN AT MAX STRESS = 0.000 0.057 0.054 0.055 0.056
STRAIN AT 2ND PT ON BASE CURVE= 0.000
      STRAIN STD DEV      AVG      A      B      C
ELASTIC MODULUS AT 0.000 19291. 355565. 257764. 297525. 318939.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 353917. DELTA STRAIN= 0.0000

```

Figure G16. Computer Run DAC503B4

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```
ex clst(stsstr) 'd1(dac503b5) 1(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 *****
TEKSSC,CHG 20,40-43-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=4,COMP=2,SHORT TENSION=2
```

```
?
2
? ENTER NUMBER OF DATA FILES
?
4
? DO YOU WANT TO DISCARD ANY TEST SPECIMENS,40 MAX
  (4=YES,2=NO)
?
2
```

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

```
?
.04 400
```

TEST SPECIMENS-	MAX STRESS	STRAIN AT MAX STRESS
4 DAC503B5-4	9354.	0.058
2 DAC503B5-2	9402.	0.056
3 DAC503B5-3	9379.	0.058
4 DAC503B5-4	9387.	0.057
5 DAC503B5-5	9243.	0.058
6 DAC503B5X-6	9243.	0.056

MAX STRAIN ON CURVE	2 OF	6=	0.088
NOT NORMAL	STRAIN	SSTRESS	DCRIT DCAC
	0.0443	4635.	0.3490 0.3348
NOT NORMAL	STRAIN	SSTRESS	DCRIT DCAC
	0.0443	4635.	0.3490 0.3348
	0.0445	4690.	0.3490 0.3808
	0.0448	4757.	0.3490 0.3726

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.004	352255.	0.004	344469.	0.004	329847.	0.004	338440.
4	0.014	334626.	0.014	344943.	0.014	322919.	0.014	327246.
6	0.046	319476.	0.046	290367.	0.046	302068.	0.046	308394.
8	0.024	289534.	0.024	269067.	0.024	277379.	0.024	284870.
		STD DEV		AVG		A		B
MAX STRESS	=	80.826	9320.737	8904.386	9082.344	9475.099		
STRAIN AT MAX STRESS	=	0.004	0.057	0.053	0.055	0.056		

STRAIN AT 2ND PT ON BASE CURVE= 0.000
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.000 45729. 365920. 288288. 340849. 336858.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 365243. DELTA STRAIN= 0.0004

Figure G17. Computer Run DAC503B5

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ex clst(stsstr) 'dl(dac6b503) g(e77623.d0211.feg001)'
**** LOAD MODULE RELOCATION FACTOR = 0AF418 ****
TEKSSC,CHG 20A,12-14-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
  SHEAR=1,COMP=2,SHORT TENSION=2
?
2
  ENTER NUMBER OF DATA FILES
?
1
  DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
  (1=YES,2=NO)
?
2
  X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
  TEST SPECIMENS-
    1 DAC503B6-1      MAX STRESS 9543.  STRAIN AT MAX STRESS 0.051
    2 DAC503B6-2      MAX STRESS 9577.  STRAIN AT MAX STRESS 0.050
    3 DAC503B6-3S     MAX STRESS 9586.  STRAIN AT MAX STRESS 0.055
    4 DAC503B6-4      MAX STRESS 9519.  STRAIN AT MAX STRESS 0.052
    5 DAC503B6-5S     MAX STRESS 9530.  STRAIN AT MAX STRESS 0.053
  MAX STRAIN ON CURVE 3 OF 5= 0.055
  NOT NORMAL STRAIN SSTRESS DCRIT DCAC 3 1.000 0.0
    0.0085 2847. 0.3370 0.3639
    0.0091 3038. 0.3370 0.3913
    0.0097 3221. 0.3370 0.3759
    0.0103 3404. 0.3370 0.3731
    0.0108 3587. 0.3370 0.3855
  NOT NORMAL STRAIN SSTRESS DCRIT DCAC 4 1.000 0.0
    0.0108 3587. 0.3370 0.3855
    0.0114 3765. 0.3370 0.3664
  AVG A B C
  PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
    2 0.007 333603. 0.007 282543. 0.007 303334. 0.007 314531.
    4 0.014 320995. 0.014 285415. 0.014 299880. 0.014 307671.
    6 0.035 247558. 0.035 225596. 0.035 234525. 0.035 239333.
    8 0.051 188263. 0.051 184513. 0.051 186038. 0.051 186859.
  STD DEV AVG A B C
  MAX STRESS = 29.371 9544.067 8958.996 9274.865 9401.412
  STRAIN AT MAX STRESS = 0.002 0.052 0.043 0.046 0.049
  STRAIN AT 1ND PT ON BASE CURVE= 0.004
  STRAIN STD DEV AVG A B C
  ELASTIC MODULUS AT 0.004 7689. 335516. 293766. 310739. 319881.
  CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 335576. DELTA STRAIN= 0.0001

```

Figure G18. Computer Run DAC503B6

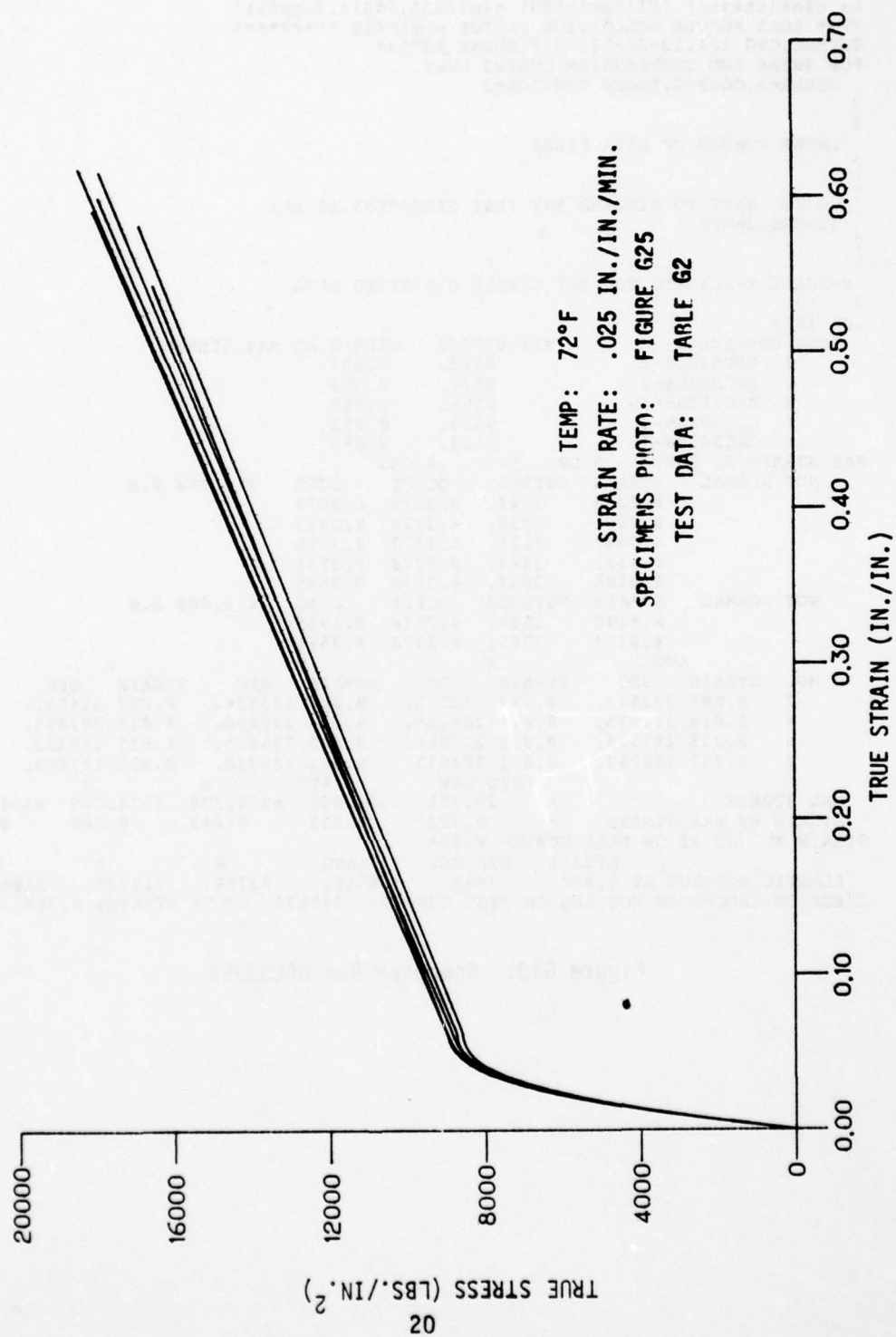


Figure G19. Tensile Average Curve (DAC 503-T1 - 0.25 Polycarbonate).

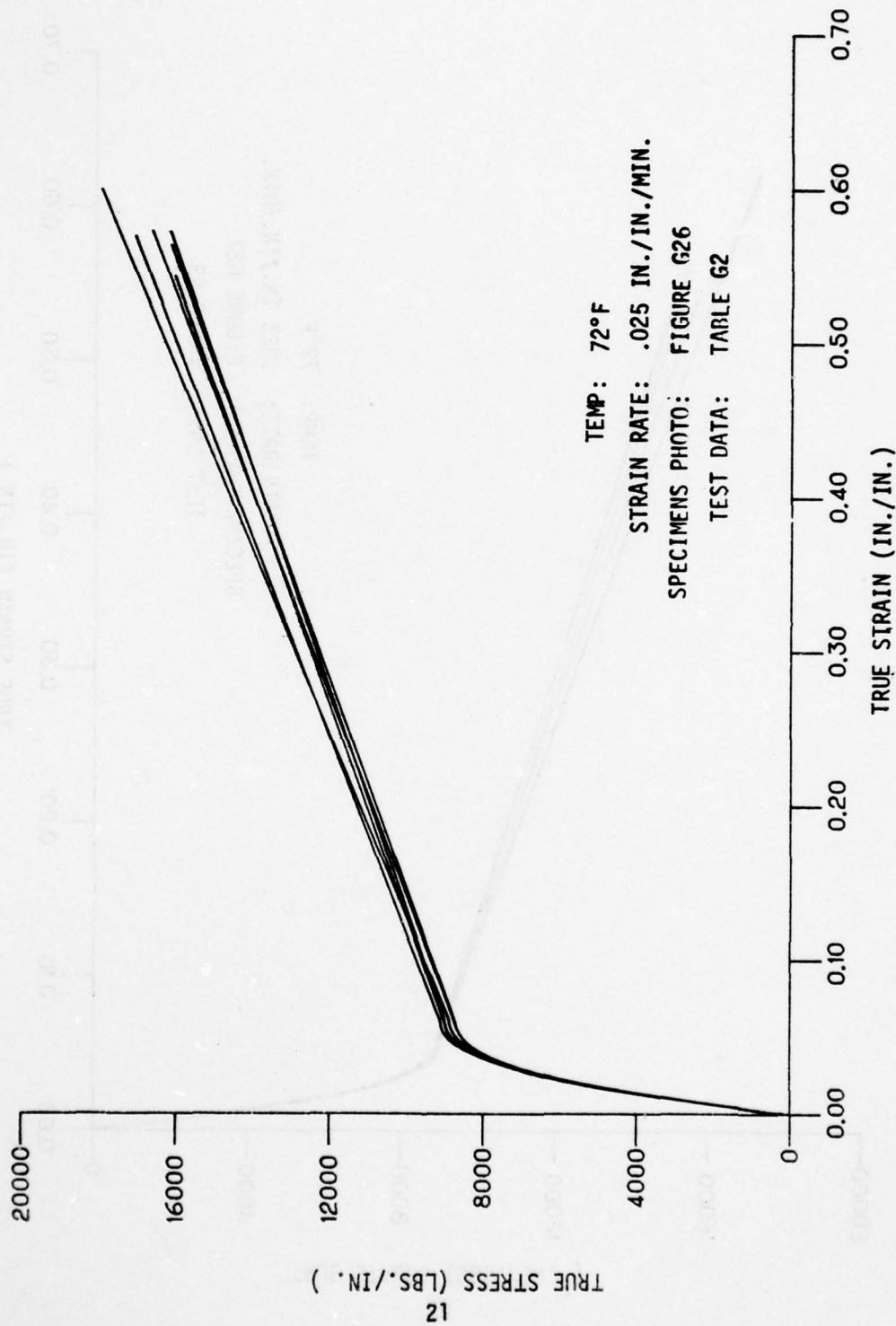


Figure G20. Tensile Test Curves (DAC 503-T2 - 0.25 Polycarbonate).

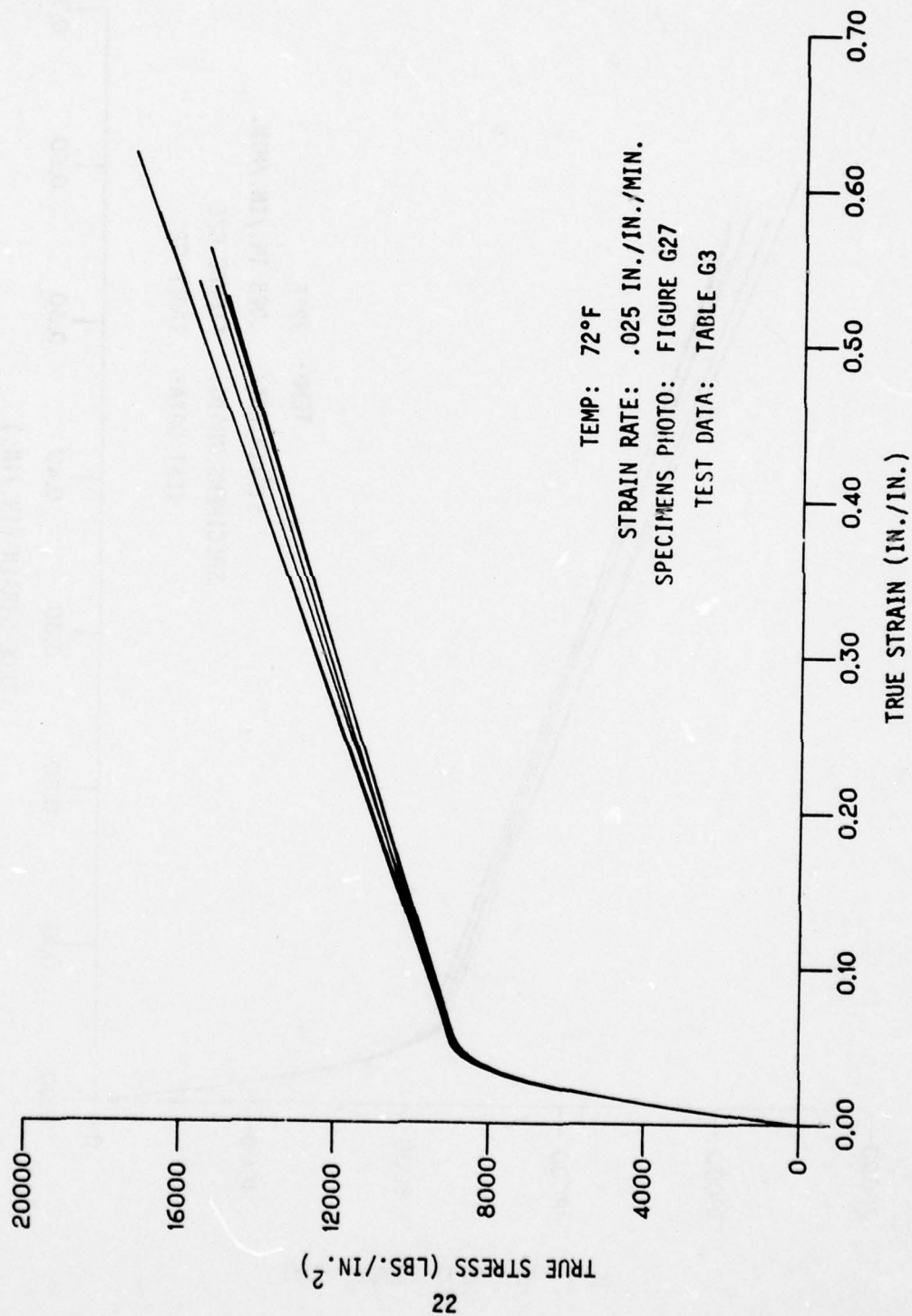


Figure G21. Tensile Test Curves (DAC 503-T3 RH - 0.25 Polycarbonate).

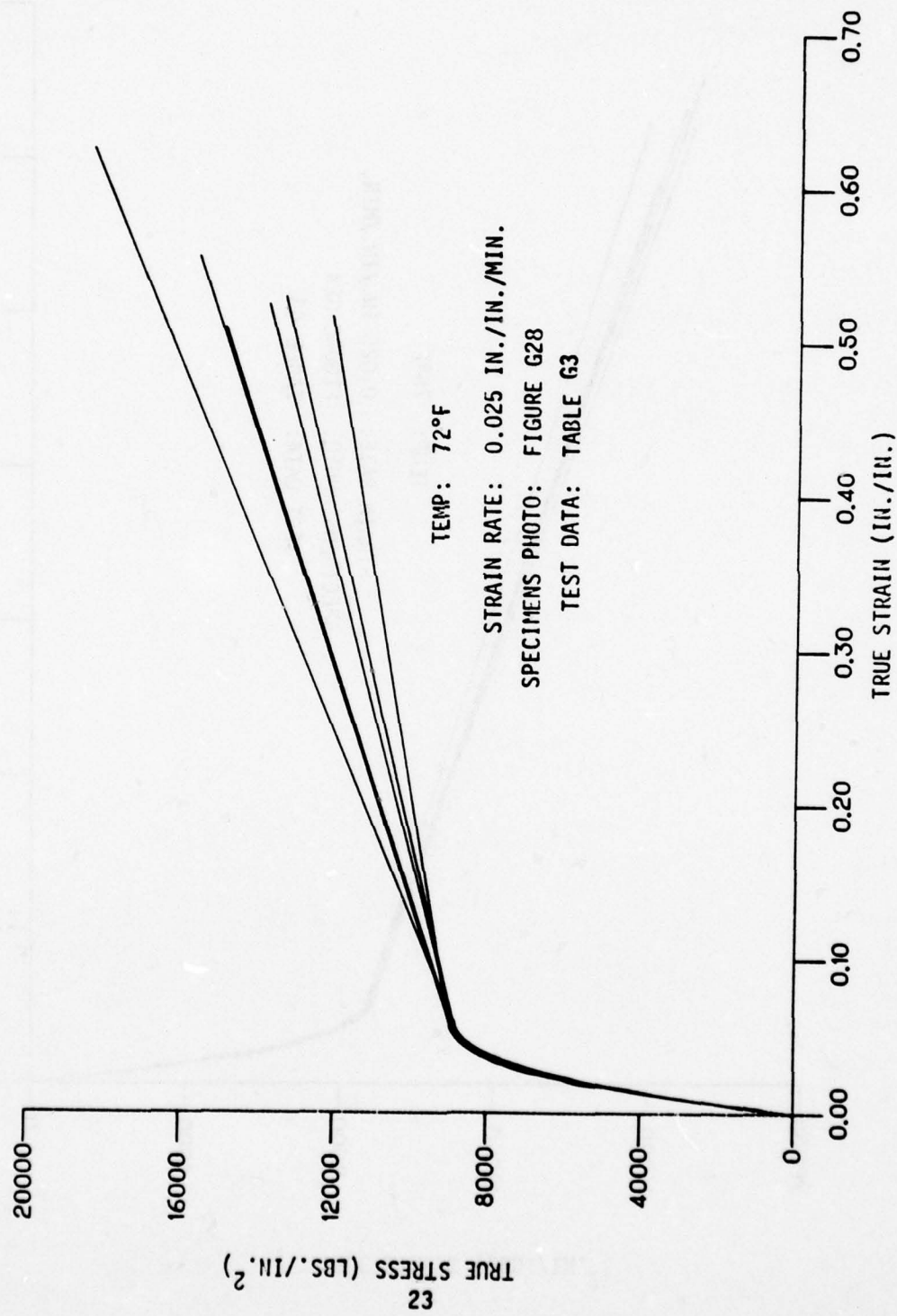


Figure G22. Tensile Test Curves (DAC 503-T4RH - 0.25 Polycarbonate).

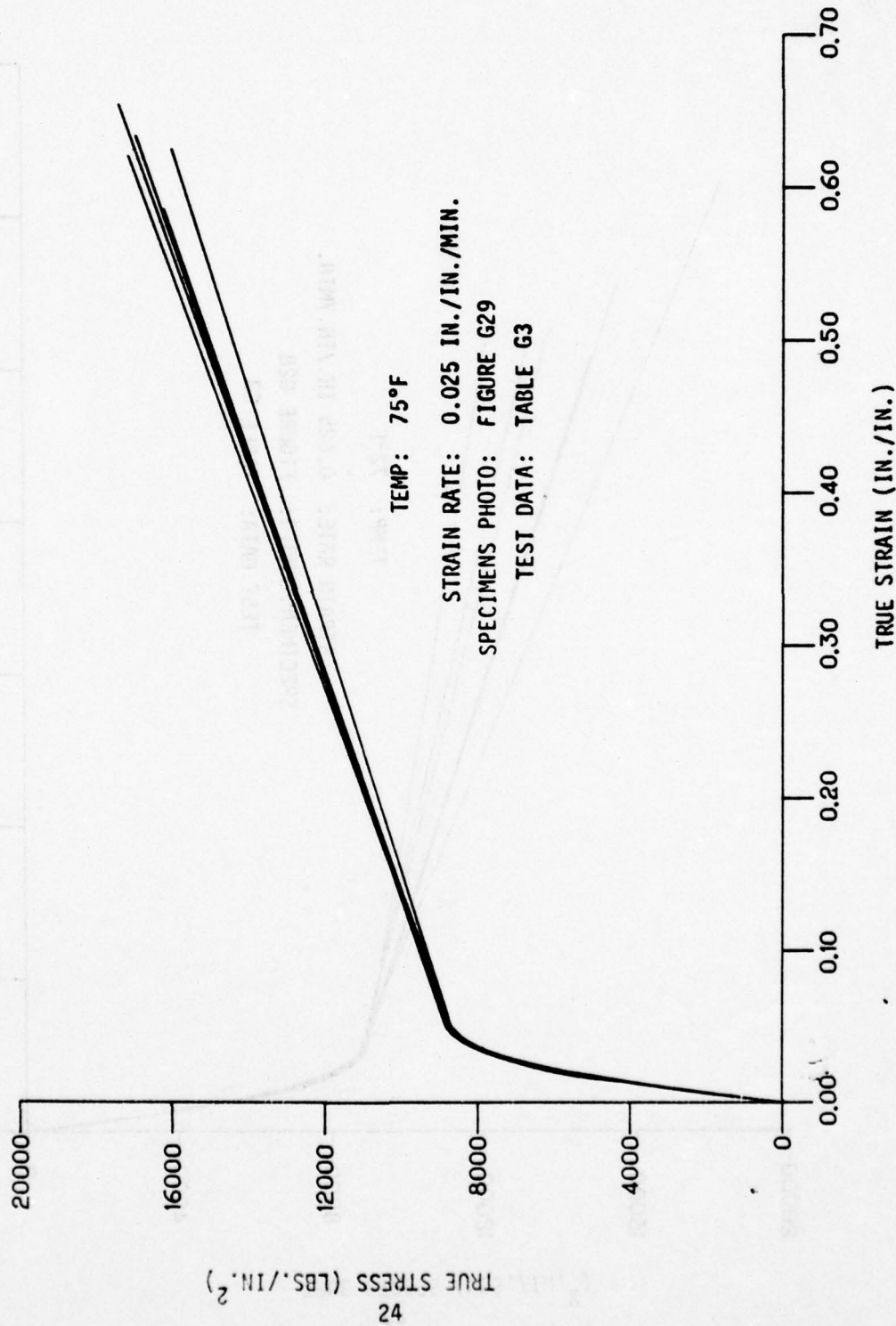


Figure G23. Tensile Test Curves (DAC 503-T5RH - 0.25 Polycarbonate).

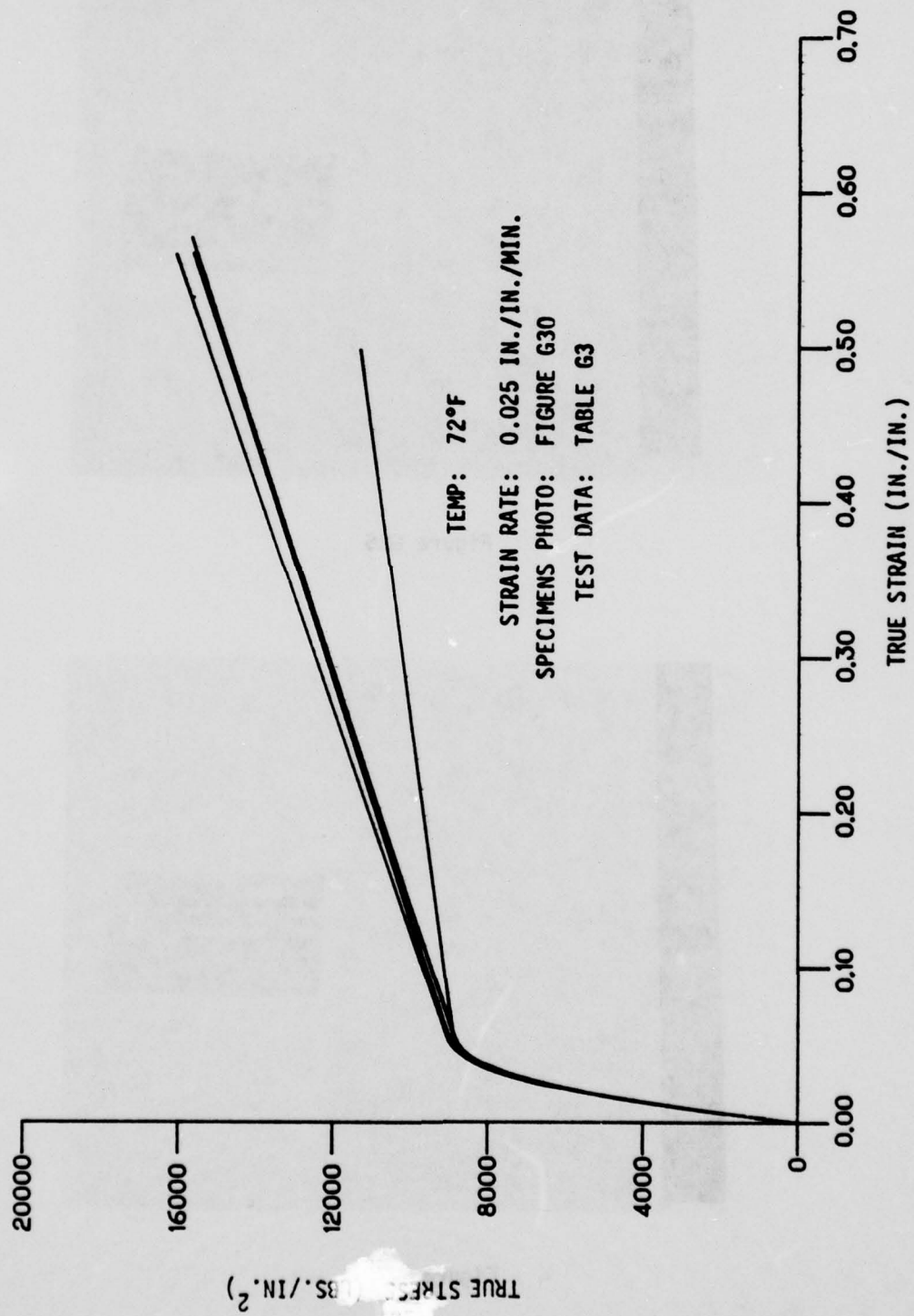


Figure G24. Tensile Test Curves (DAC 503-T6 RH - 0.25 Polycarbonate).

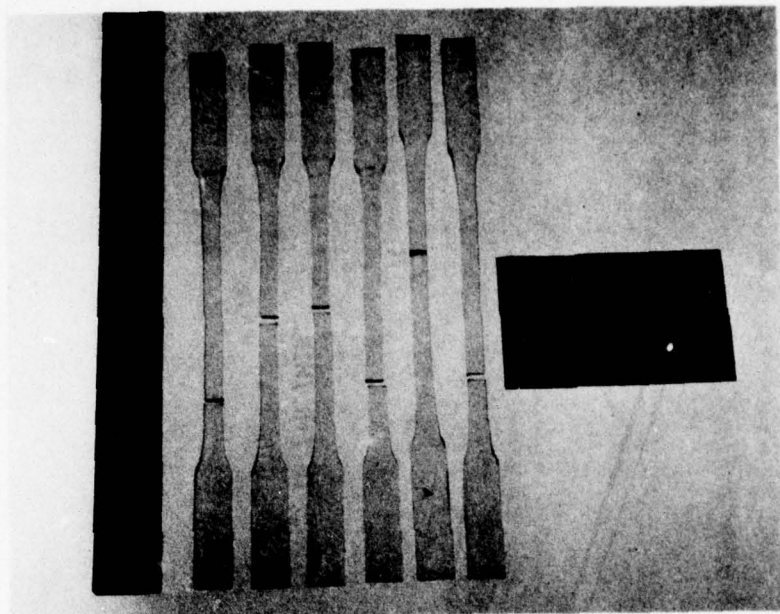


Figure 625

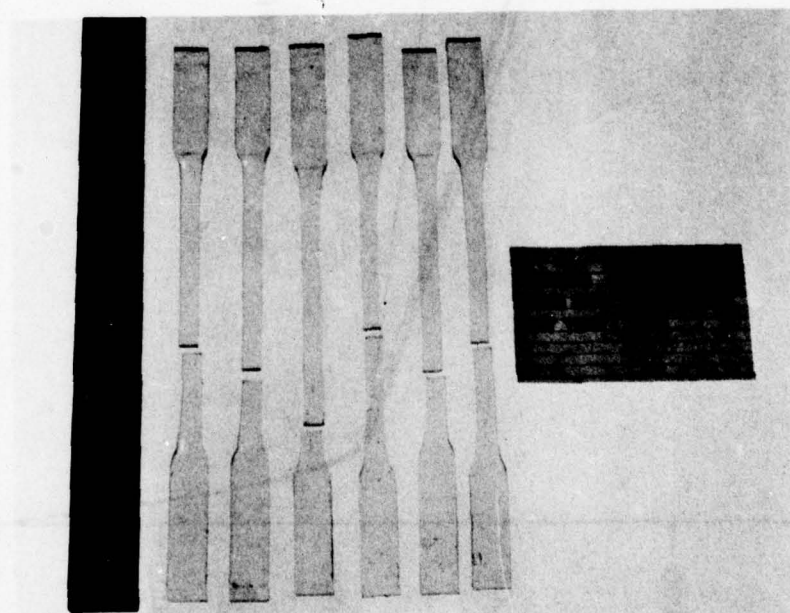


Figure 626

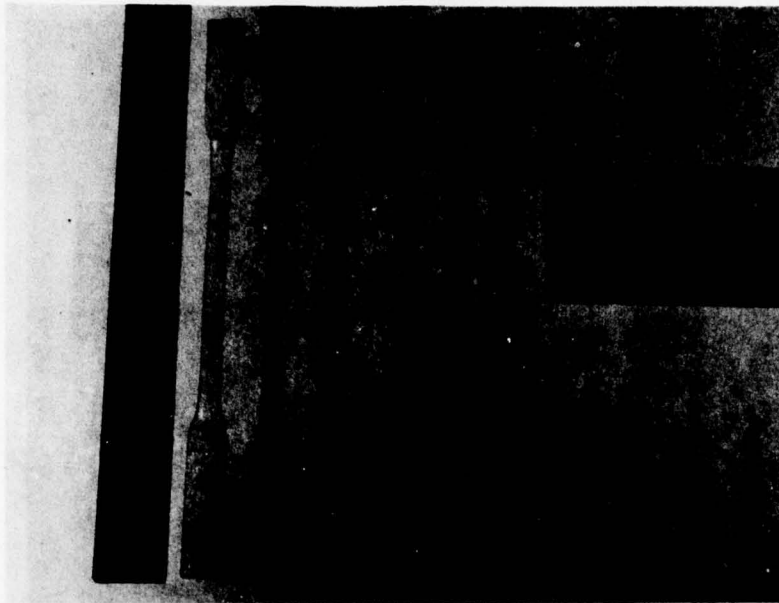


Figure G27

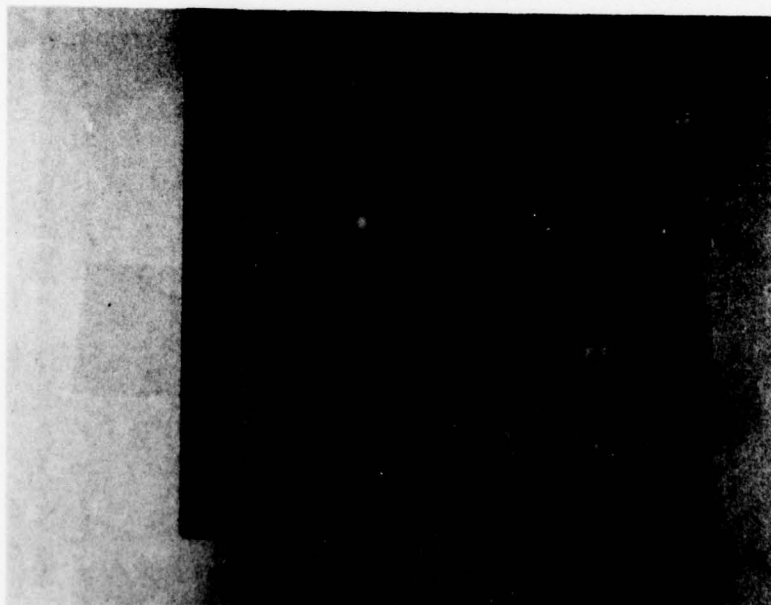


Figure G28

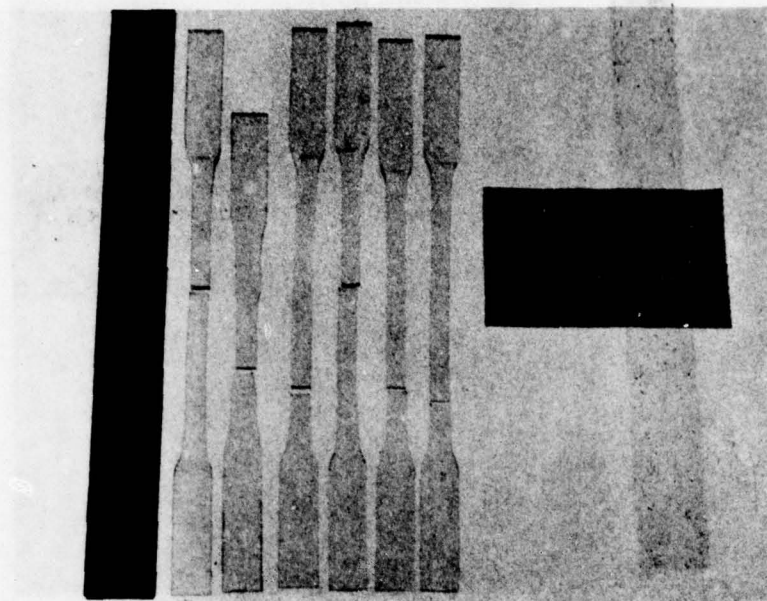


Figure 629

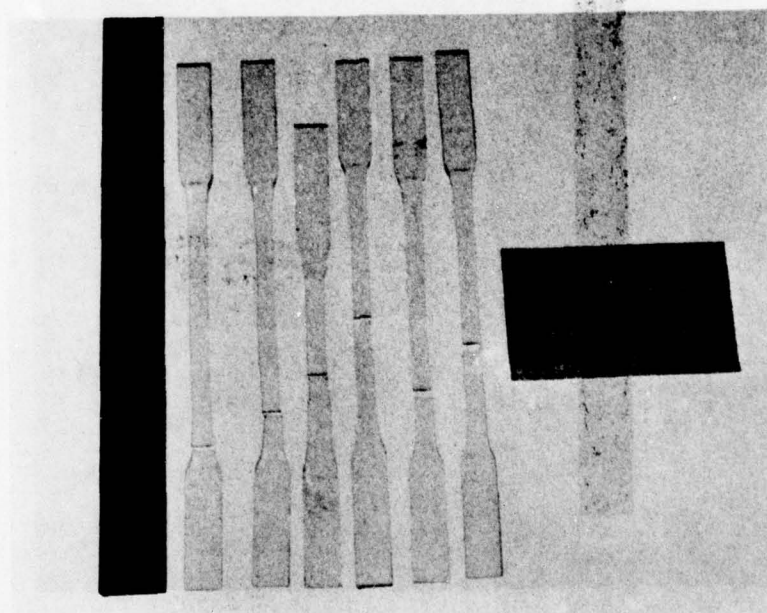


Figure 630

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ex clst(=sstr) 'd1(rn503t1) 1(teksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1EO *****
TEKSST,CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
  ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS-  END POINT STRESS  STRAIN
1  R4503T 1-1      16815.    0.582
2  R4503T 1-2      17846.    0.616
3  R4503T 1-3      17965.    0.600
4  R4503T 1-4      18378.    0.618
5  R4503T 1-5      16454.    0.544
6  R4503T 1-6      17990.    0.591
      AVG STD DEV      A      B      C
FRACTURE STRAINS = 0.592 0.028 0.452 0.509 0.540
FRACTURE STRESSES = 17558.062 749.138 13765.924 15306.153 16138.445
ORIGINAL CURVES TRUNCATED AT 0.053 STRAIN
BASE CURVE IS 1 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
      AVG STD DEV      A      B      C
YIELD STRESS = 8957.834 163.981 8002.453 8349.577 8537.615
SECANT TO YIELD STRESS = 141376.861 127724. 133270. 136266.
      AVG      A      B      C
PC NO.  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC
2  0.010 308326. 0.010 281630. 0.010 292473. 0.010 298332.
4  0.018 280567. 0.018 256179. 0.018 266085. 0.018 271437.
6  0.051 170543. 0.051 156348. 0.051 162114. 0.051 165229.
8  0.592 29663. 0.452 30430. 0.509 30068. 0.540 29903.
STRAIN AT 2ND PT ON BASE CURVE= 0.005
      STRAIN  STD DEV  AVG      A      B      C
ELASTIC MODULUS AT 0.005 4786. 304964. 291093. 296727. 299771.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 305211.
AREA UNDER AVERAGE DESIGN CURVE= 7385.091

```

Figure G31. Computer Run DAC503T1

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ex clst(stsstr) 'd1(rh503t2) 1(tekstt)*
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 *****
TEKSTT,CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 RH503T 2-1 16618. 0.573
2 RH503T 2-1 16135. 0.564
3 RH503T3 2-3 16039. 0.544
4 RH503T 2-1 17936. 0.599
5 RH503T3 2-5 16144. 0.572
6 RH503T 2-6 17060. 0.569
          AVG STD DEV      A      B      C
FRACTURE STRAINS = 0.570 0.018 0.480 0.516 0.536
FRACTURE STRESSES = 16655.362 737.120 12924.062 14439.580 15254.521
ORIGINAL CURVES TRUNCATED AT 0.062 STRAIN
BASE CURVE IS 5 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
          AVG STD DEV      A      B      C
YIELD STRESS = 8926.498 155.346 3140.136 8459.528 3632.117
SECANT TO YIELD STRESS = 143938.655 131259. 136409. 139192.
          AVG      A      B      C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.006 316002. 0.006 274403. 0.006 291299. 0.006 300429.
4 0.011 303902. 0.011 280945. 0.011 290269. 0.011 295308.
6 0.030 240735. 0.030 227565. 0.030 232915. 0.030 235805.
8 0.046 186933. 0.046 169461. 0.046 176557. 0.046 180392.
STRAIN AT 2ND PT ON BASE CURVE= 0.003
          STRAIN STD DEV AVG      A      B      C
ELASTIC MODULUS AT 0.003 4799. 312293. 292641. 300623. 304936.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 312414.
AREA UNDER AVERAGE DESIGN CURVE= 6892.601

```

Figure G32. Computer Run DAC503T2

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on:clst(stsstr) 'a1(rh503t3) 1(tekst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 ****
TERMS:CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 RH503T 3-1 15213. 0.536
2 RH503T 3-2 16673. 0.563
3 RH503T 3-3 15644. 0.540
4 RH503T 3-4 17272. 0.622
5 RH503T 3-5 15363. 0.561
6 RH503T 3-6 14879. 0.529
          AVG STD DEV      A      B      C
FRACTURE STRAINS = 0.562 0.035 0.362 0.455 0.495
FRACTURE STRESSES = 15840.513 930.276 11131.455 13044.103 14077.640
ORIGINAL CURVES TRUNCATED AT 0.062 STRAIN
LAST CURVE IS 2 OF CURVES USED.
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0084 2623. 0.3190 0.3741
0.0091 2812. 0.3190 0.3635
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
          AVG STD DEV      A      B      C
YIELD STRESS = 9036.644 58.318 8741.437 8661.340 8926.131
SECANT TO YIELD STRESS =146832.398 142036. 143964. 145037.
          AVG      A      B      C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.008 311591. 0.008 295447. 0.008 302004. 0.008 305547.
4 0.017 288924. 0.017 281491. 0.017 284510. 0.017 286141.
6 0.041 206270. 0.041 197079. 0.041 200812. 0.041 202829.
8 0.562 28192. 0.382 29121. 0.455 28655. 0.495 28461.
STRAIN AT END PT ON LAST CURVE= 0.004
          STRAIN STD DEV AVG      A      B      C
ELASTIC MODULUS AT 0.004 4807. 309716. 303138. 305610. 307253.
CHECK ON CALC-ELN MODULUS ON TEST CURVES= 309933.
LINE UNDER AVERAGE DESIGN CURVE= 6618.841

```

Figure G33. Computer Run DAC503T3

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EX CLST(STSSTR) 'D4(RH503T4) G(E77623.D0244.FEG006) L(TEKSST)'

**** LOAD MODULE RELOCATION FACTOR = 0AF8EO *****

TEKSST,CHG #2A,40-49-77; J.F.BURKE X37544

THIS PROGRAM IS FOR TENSION TEST CURVES ONLY

ENTER NUMBER OF DATA FILES

?

1

DO YOU WANT TO DISCARD ANY TEST SPECIMENS,40 MAX

(1=YES,2=NO)

?

2

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

?

.01 1000

TEST SPECIMENS- END POINT STRESS STRAIN

1	RH503T4-0	45598.	0.554
2	RH503T4-2	42839.	0.546
3	RH503T4-3	43360.	0.529
4	RH503T4-4	48382.	0.624
5	RH503T4-5	43786.	0.524
6	RH503T4-6	44909.	0.508

AVG STD DEV

FRACTURE STRAINS = 0.543 0.043

FRACTURE STRESSES = 44605.834 2472.288

A

B

C

0.325

0.484

0.468

ORIGINAL CURVES TRUNCATED AT 0.064 STRAIN

BASE CURVE IS 3 OF CURVES USED.

NOT NORMAL STRAIN SSTRESS DCRIT DCAC

0.0086 2650. 0.3490 0.3194

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

AVG STD DEV

YIELD STRESS = 8948.278 53.087

SECANT TO YIELD STRESS = 446309.260

A

B

C

8649.544

8758.690

8847.674

144908.

443690.

444659.

AVG

A

B

C

PC NO.

STRAIN

SEC

STRAIN

SEC

STRAIN

SEC

STRAIN

SEC

2 0.008 340826.

0.008 292286.

0.008 299846.

0.008 303886.

4 0.047 285082.

0.047 266703.

0.047 274468.

0.047 278202.

6 0.037 243794.

0.037 497605.

0.037 204079.

0.037 207730.

8 0.064 446309. 0.064 444908. 0.064 443690. 0.064 444659.

STRAIN AT 2ND PT ON BASE CURVE= 0.004

STRAIN STD DEV

AVG

A

B

C

ELASTIC MODULUS AT 0.004

4400.

306444.

343764.

340669.

308997.

CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 306569.

AREA UNDER AVERAGE DESIGN CURVE= 6070.087

Figure G34. Computer Run DAC503T4

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INPUT NUMBER TO BE DISCARDED & POSITION NUMBERS ONE AT A TIME

?
1
?
2
?
X-SCALE Y-SCALE TO CORRECT GLIDER DIGITISED DATA
?
.01 1000

TEST SPECIMENS-	END POINT STRESS	STRAIN
1 RL503T 5-1	17157.	0.620
3 RL503T 5-3	16228.	0.585
4 RL503T 5-4	17408.	0.654
5 RL503T 5-5	16020.	0.625
6 RL503T 5-6	16950.	0.633

	AVG	STD DEV	A	B	C
FRacture STRAINS	= 0.623	0.025	0.480	0.538	0.570
FRacture STRESSES	= 16752.490	600.947	13302.454	14705.064	15460.454

ORIGINAL CURVES TRUNCATED AT 0.056 STRAIN

BASE CURVE IS 1 OF CURVES USED.

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0185	5294.	0.3370	0.3566
	0.0196	5505.	0.3370	0.4043
	0.0206	5714.	0.3370	0.4558
	0.0217	5970.	0.3370	0.3804
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0301	7319.	0.3370	0.3591
	0.0306	7381.	0.3370	0.3822
	0.0311	7444.	0.3370	0.3960
	0.0317	7509.	0.3370	0.3995
	0.0322	7574.	0.3370	0.3943
	0.0328	7639.	0.3370	0.3822
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0328	7639.	0.3370	0.3822
	0.0335	7718.	0.3370	0.3819
	0.0342	7795.	0.3370	0.3416
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0380	8130.	0.3370	0.3486
	0.0389	8190.	0.3370	0.3727
	0.0398	8253.	0.3370	0.3723
	0.0408	8315.	0.3370	0.3639
	0.0417	8374.	0.3370	0.3593
	0.0427	8429.	0.3370	0.3564
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0427	8429.	0.3370	0.3564
	0.0436	8476.	0.3370	0.3608
	0.0445	8521.	0.3370	0.3645
	0.0454	8562.	0.3370	0.3682
	0.0463	8601.	0.3370	0.3712
	0.0472	8637.	0.3370	0.3727
	0.0482	8670.	0.3370	0.3719
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0482	8670.	0.3370	0.3719
	0.0494	8708.	0.3370	0.3615
	0.0506	8741.	0.3370	0.3419

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

	AVG	STD DEV	A	B	C
YIELD STRESS	= 8819.378	59.988	8474.984	8614.997	8690.403
SECANT TO YIELD STRESS	= 158490.616		152302.	154818.	156173.

PC NO.	STRAIN	SLC	STRAIN	SLC	STRAIN	SLC	STRAIN	SLC
2	0.008	306945.	0.008	272168.	0.008	286306.	0.008	293921.
4	0.018	290301.	0.018	224607.	0.018	251315.	0.018	265098.
6	0.027	257117.	0.027	233272.	0.027	242966.	0.027	248187.
8	0.033	233525.	0.033	220750.	0.033	225943.	0.033	228741.

STRAIN AT 2ND PT ON BASE CURVE= 0.004

	STRAIN	STD DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.004	7722.	308440.	270562.	285961.	294255.	
CHECK ON CALC-MEAN MODULUS ON TEST CURVES=	308331.					
FIRST UNDER AVERAGE DESIGN CURVE=	7597.433					

Figure G35. Computer Run DAC503T5
33

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ex clst(stsstr) 'd1(rh503t6) g(e77623.d0211.feg011) 1(teksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1ED *****
TEREST,CIG 12A,10-19-77; J.F.LURKE N37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
  ENTER NUMBER OF DATA FILLS
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
  1 RH503T6-1 16049. 0.558
  2 RH503T6-2 15562. 0.559
  3 RH503T6-3 11295. 0.498
  4 RH503T6-4 15608. 0.559
  5 RH503T6-5 15646. 0.569
  6 RH503T6-6 15327. 0.545
STRAIN AT FRACTURE POINT IS NOT NORMAL
      AVG STD DEV      A      B      C
NOT NORMAL STRAIN SStress DCRT DCAC
  0.5446 15327. 0.3190 0.4245
FRACTURE STRAINS = 0.546 0.026 0.417 0.470 0.499
FRACTURE STRESSES = 14914.733 1708.520 5601.243 9536.441 11525.437
ORIGINAL CURVES TRUNCATED AT 0.056 STRAIN
LAST CURVE IS 5 OF CURVES USED.
      NOT NORMAL STRAIN SStress DCRT DCAC
      0.0011 353. 0.3190 0.3364
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
      AVG STD DEV      A      B      C
YIELD STRESS = 8949.727 90.716 8490.523 8677.035 8777.820
SECRET TO YIELD STRESS =160073.683 151660. 155136. 150999.
      AVG      A      B      C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
  2 0.007 312366. 0.007 290050. 0.007 299114. 0.007 304012.
  4 0.018 288390. 0.018 277260. 0.018 281780. 0.018 284223.
  6 0.027 254240. 0.027 234676. 0.027 242741. 0.027 246991.
  8 0.037 220932. 0.037 207234. 0.037 212797. 0.037 215604.
STRAIN AT END PT ON LAST CURVE= 0.003
      STRAIN STD DEV      AVG      A      B      C
ELASTIC MODULUS AT 0.003 5842. 312893. 322710. 316727. 316571.
CHECK ON CMTC-PLAN MODULUS ON TEST CURVES= 312926.
AVERAGE UNDER AVERAGE DESIGN CURVE= 6213.554
PLOTTER PLOTS - YES=1,NO=0
?
0
GERBER HARD COPY YES=1,NO=0
?
1
INPUT NUMBER OF CURVES TO BE DISCARDED AND CURVE
NUMBERS (1=AVG,2=A,3=B,4=C,5=ORIGINAL INPUT) ONE AT A TIME
?
1
?
2
XSCALE(STRAIN) AND YSCALE(STRESS) FACTORS IN UNITS PER INCH
?
.1 4000

```

Figure G36. Computer Run DAC503T6

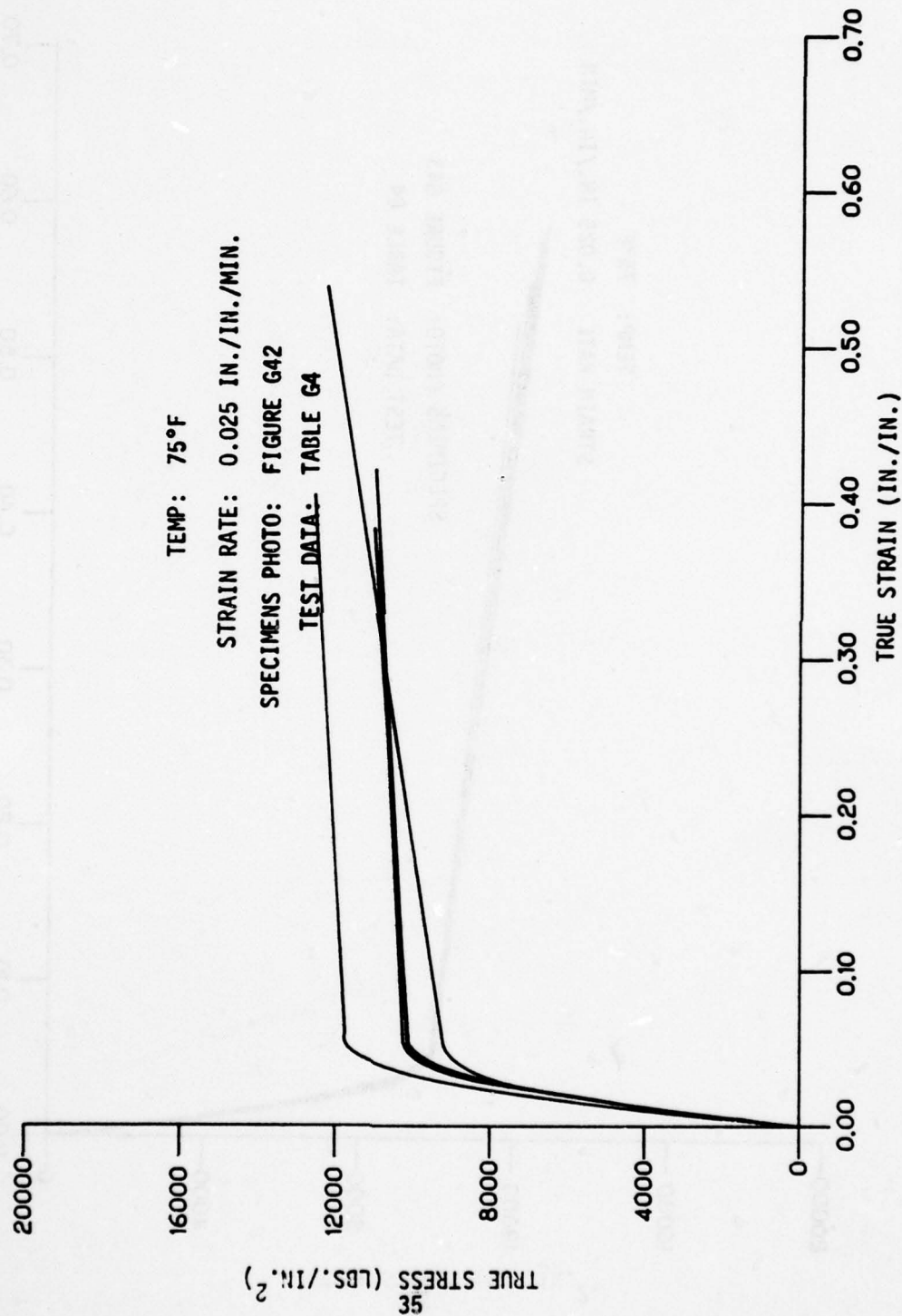


Figure G37. Tensile Test Curves (TEX605/27TC - 0.44 Polycarbonate)

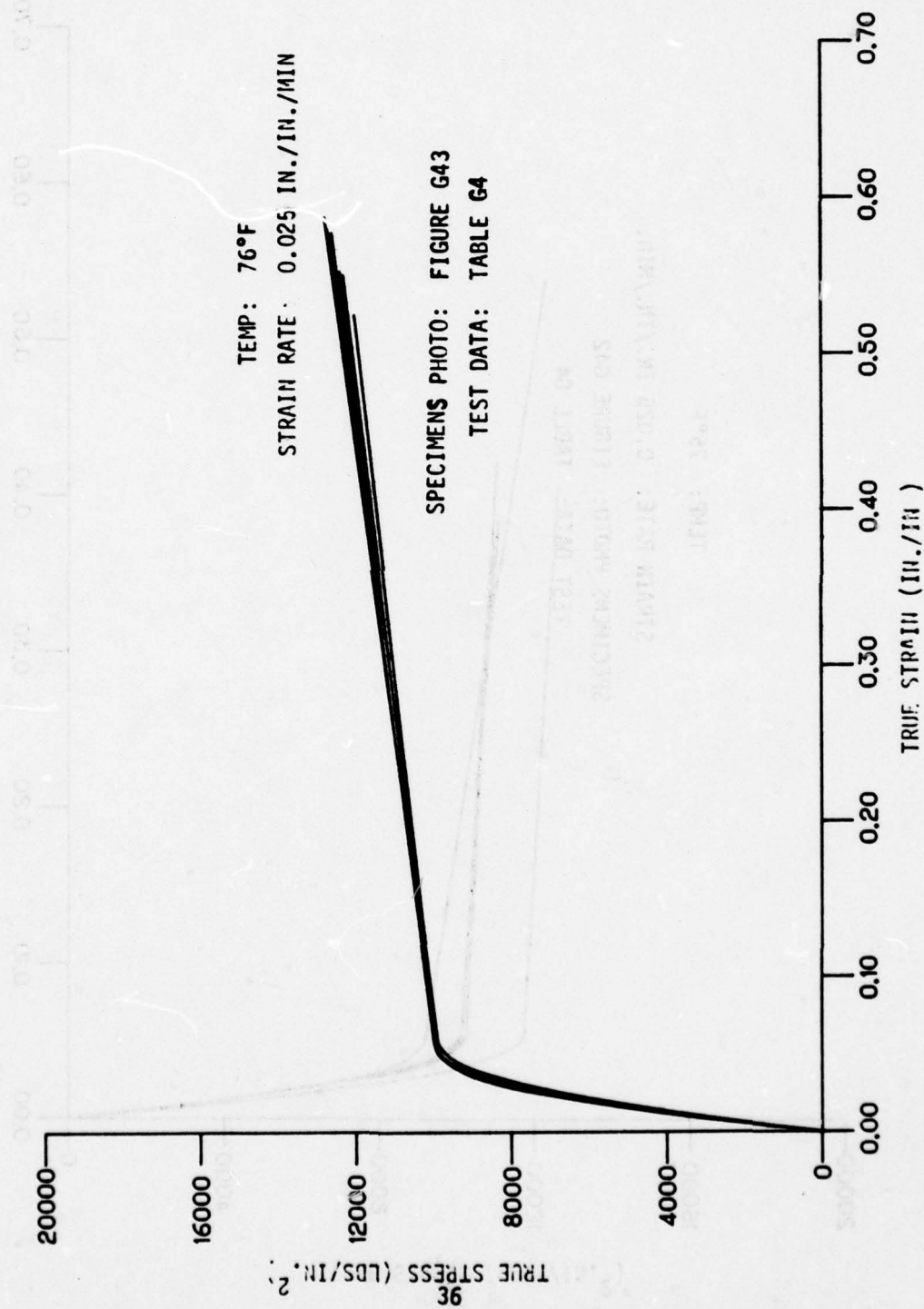


Figure G38. Tensile Test Curves (TEX 005/027 - 0.44 Polycarbonate).

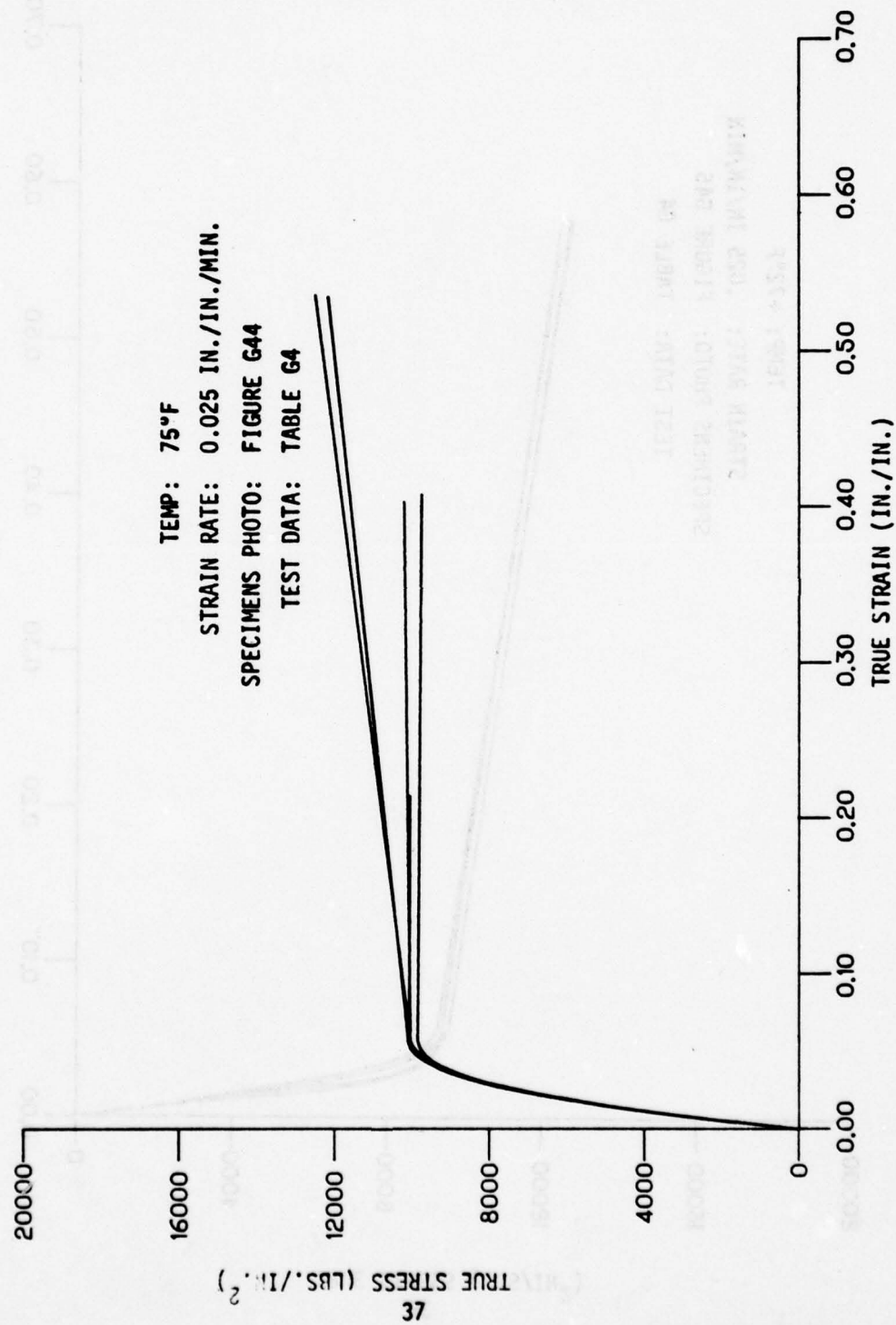


Figure G39. Tensile Test Curves (PPG571 - 0.50 Polycarbonate)

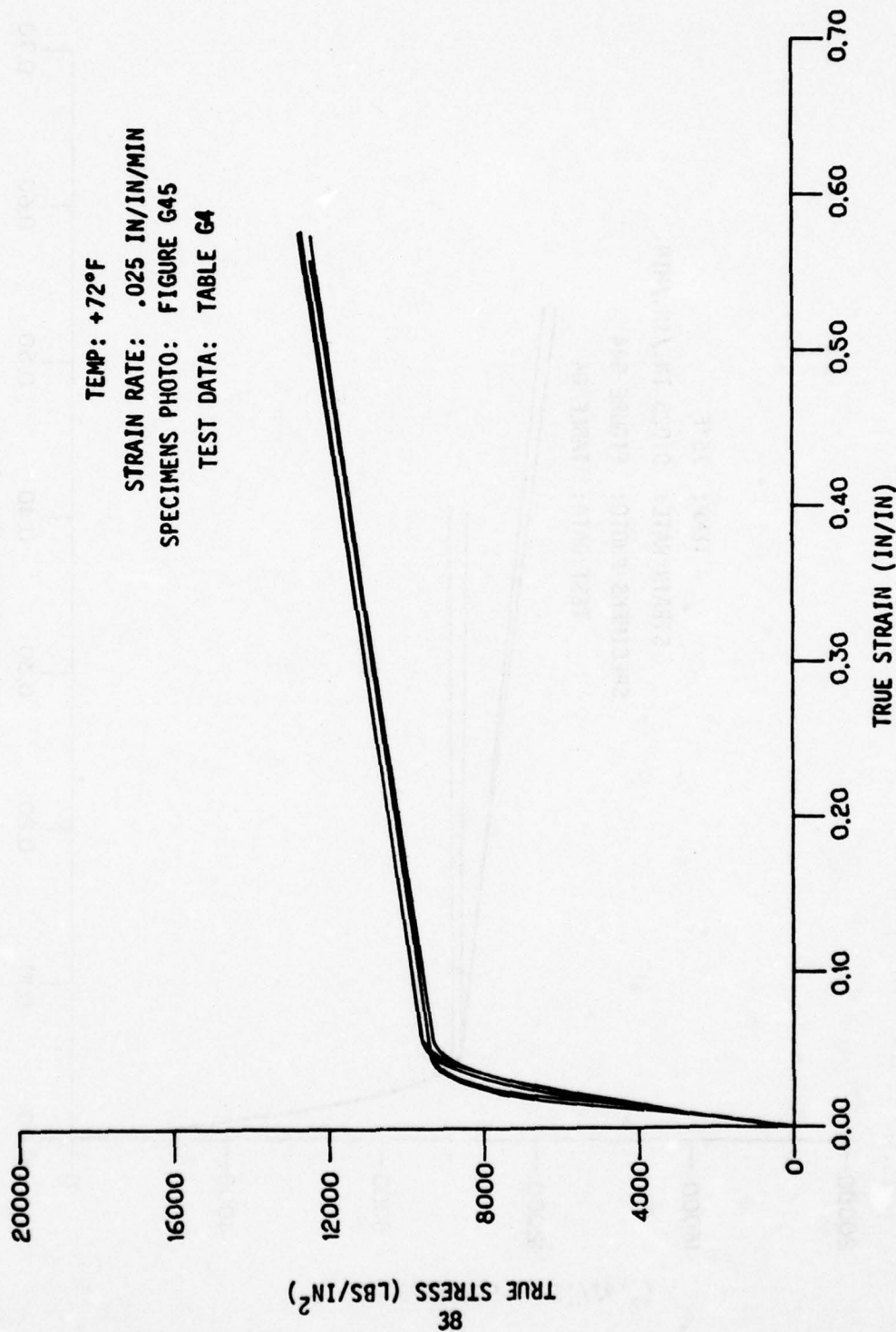


Figure G40. Tensile Test Curves (SK605 - 0.50 Polycarbonate)

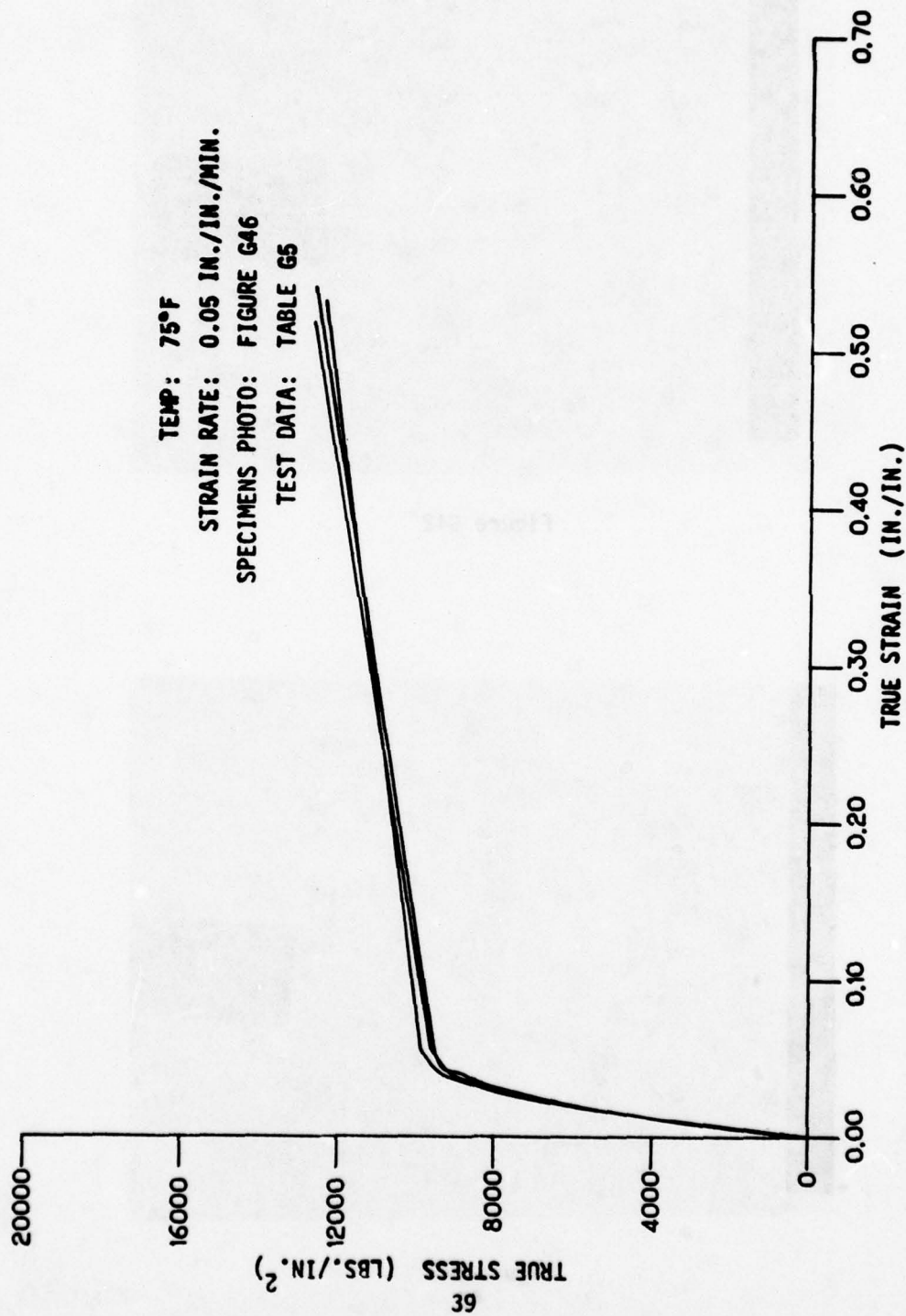


Figure G41. Tensile Test Curves (SWU 541(108) - 0.87 Polycarbonate).

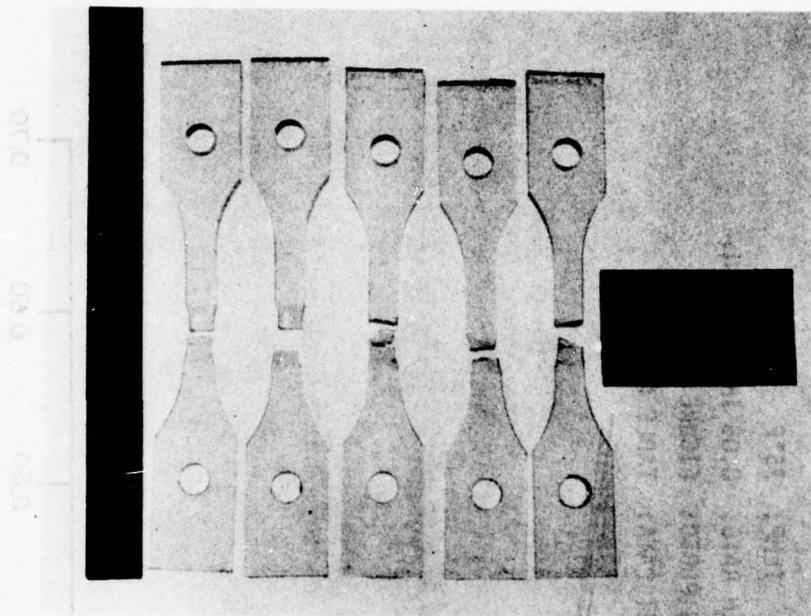


Figure 642

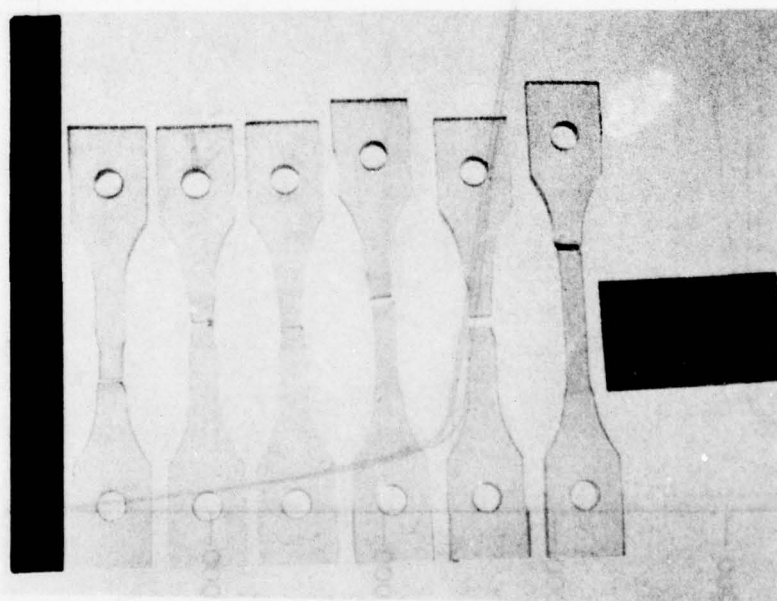


Figure 643

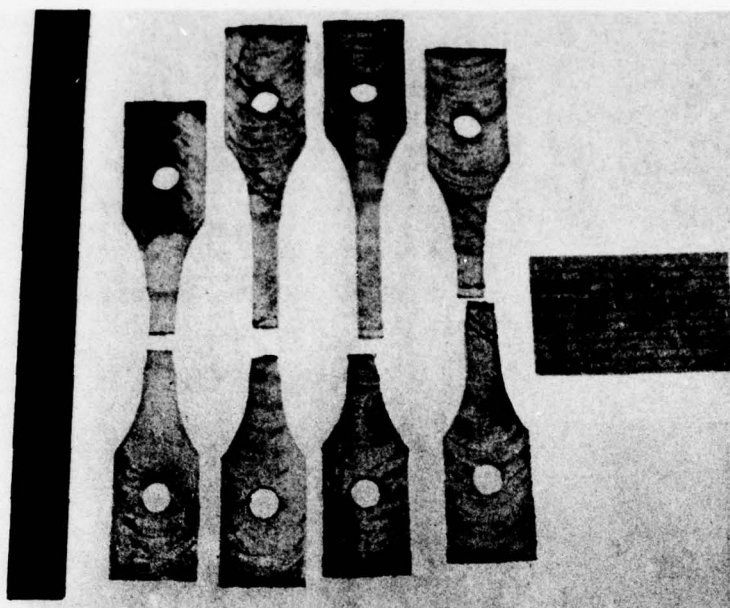


Figure 644

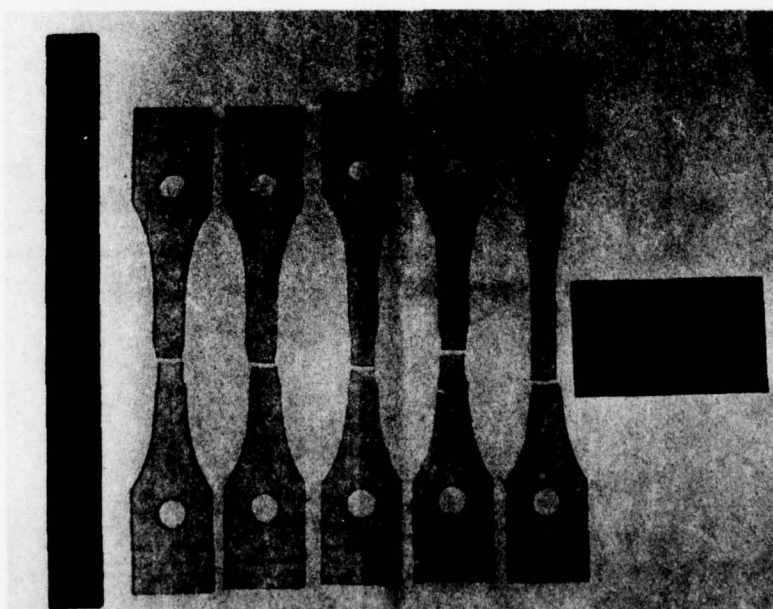


Figure 645
41

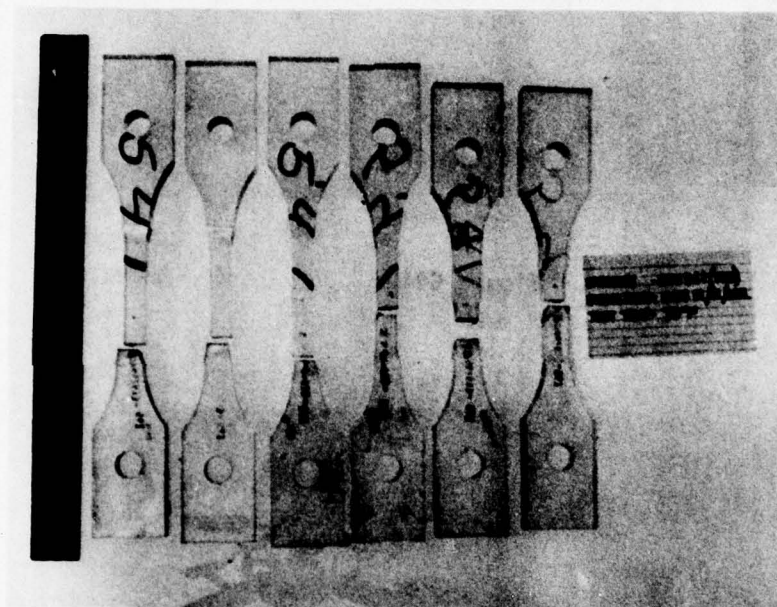


Figure G46

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ex clst(stsstr) 'd1(tx160501) g(a//643.du411.requu3) 1(tekstt)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 *****

TEKSST,CHG 12A,10-19-77; J.F.BURKE X37544

THIS PROGRAM IS FOR TENSION TEST CURVES ONLY

ENTER NUMBER OF DATA FILES

?

1

DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)

?

2

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

?

.01 1000

TEST SPECIMENS-	END POINT STRESS	STRAIN
1 TEX605/01TC1	12670.	0.577
2 TEX605/01TC2	11751.	0.527
3 TEX605/01TC3	11774.	0.509
4 TEX605/01TC4	12206.	0.537
5 TEX605/01TC5	11928.	0.517

	AVG	STD DEV	A	B	C
FRACTURE STRAINS	= 0.533	0.027	0.381	0.443	0.476
FRACTURE STRESSES	= 12065.800	383.389	9864.763	10759.593	11241.513

ORIGINAL CURVES TRUNCATED AT 0.057 STRAIN

BASE CURVE IS 4 OF CURVES USED.

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0058	2073.	0.3370	0.3416
	0.0066	2337.	0.3370	0.3660
	0.0074	2601.	0.3370	0.3863
	0.0082	2864.	0.3370	0.4019
	0.0090	3126.	0.3370	0.4089
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0090	3126.	0.3370	0.4089
	0.0098	3366.	0.3370	0.4103
	0.0105	3607.	0.3370	0.4092
	0.0114	3849.	0.3370	0.4072
	0.0122	4093.	0.3370	0.4052
	0.0131	4332.	0.3370	0.3907
	0.0139	4571.	0.3370	0.3703
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0139	4571.	0.3370	0.3703
	0.0149	4824.	0.3370	0.3433
	0.0197	6094.	0.3370	0.3871
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0197	6094.	0.3370	0.3871
	0.0204	6247.	0.3370	0.3547
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0383	9313.	0.3370	0.3492
	0.0404	9488.	0.3370	0.3747
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0404	9488.	0.3370	0.3747
	0.0415	9557.	0.3370	0.3584
	0.0427	9620.	0.3370	0.3421

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

	AVG	STD DEV	A	B	C
YIELD STRESS	= 9947.559	125.079	9229.483	9521.416	9678.640
SECANT TO YIELD STRESS	= 174899.022		162274.	167407.	170171.

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.009	342909.	0.009	236576.	0.009	279806.	0.009	303088.
4	0.020	306841.	0.020	248359.	0.020	272135.	0.020	284940.
6	0.030	274870.	0.030	236513.	0.030	252107.	0.030	260506.
8	0.048	206389.	0.048	188398.	0.048	195712.	0.048	199651.

STRAIN AT 2ND PT ON BASE CURVE= 0.004

	STRAIN	STD DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.004	19627.		344229.	250929.	288860.	309289.

CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 344371.

AREA UNDER AVERAGE DESIGN CURVE= 5637.752

Figure G47. Computer Run TEX605 (A4TC)

```
EX CIST(STATUS) 'C1(CENT05A1) @ (EASST)'
*** DATA MODEL DESCRIPTION FACTOR = GAFILE *****
TESTT,CIG 141,10-19-77 J.F.MARIL H37544
TIME LOGGED IN FOR TRANSACTION TIME CLVLE GML.
***** END OF DATA FILE
```

1 DO NOT WANT TO SIGN ANY TEST SPECIMENS, TO ME
(1-113,000)

2-1001 1-200120 000000 000000 000000 000000

41 1004 -

TEST SPECIMEN	MAX POINT STRESS	STRAIN
1 TLM6051-27-1	12551.	0.550
2 TLM6051-27-2	12542.	0.577
3 TLM6051-27-3	12742.	0.567
4 TLM6051-27-4	12646.	0.579
5 TLM6051-27-5	12337.	0.532
6 TLM6051-27-7	11963.	0.544

	AVG	STD DEV	A	B	C
FRACUTRE STRENGTH	= 0.561	0.024	0.442	0.490	0.517
FRACUTRE STRENGTH	= 12410.500	263.469	10975.480	11550.333	11073.269

CHINESE CLAVEL TREATED AT 0.066 STRAIN

first curve is 1 of curves used -

NOT NORMAL	STRAIN	ESTRUSE	JOINT	DCAC
	0.0147	4628.	0.0193	0.3461
	0.0157	4671.	0.0199	0.3446
	0.0166	5105.	0.0190	0.3345

DATE	DESCRIPTION	DEBIT	CREDIT	BALANCE
01/01/00	OPENING BALANCE			0.0000
01/01/00	SALES		0.0100	0.0100
01/01/00	SALES TAX		0.0010	0.0110
01/01/00	EXPENSES	0.0100		0.0010
01/01/00	SALES		0.0100	0.0110
01/01/00	SALES TAX		0.0010	0.0120
01/01/00	EXPENSES	0.0100		0.0020
01/01/00	SALES		0.0100	0.0120
01/01/00	SALES TAX		0.0010	0.0130
01/01/00	EXPENSES	0.0100		0.0030
01/01/00	SALES		0.0100	0.0030
01/01/00	SALES TAX		0.0010	0.0040
01/01/00	EXPENSES	0.0100		0.0040
01/01/00	SALES		0.0100	0.0040
01/01/00	SALES TAX		0.0010	0.0050
01/01/00	EXPENSES	0.0100		0.0050
01/01/00	SALES		0.0100	0.0050
01/01/00	SALES TAX		0.0010	0.0060
01/01/00	EXPENSES	0.0100		0.0060
01/01/00	SALES		0.0100	0.0060
01/01/00	SALES TAX		0.0010	0.0070
01/01/00	EXPENSES	0.0100		0.0070
01/01/00	SALES		0.0100	0.0070
01/01/00	SALES TAX		0.0010	0.0080
01/01/00	EXPENSES	0.0100		0.0080
01/01/00	SALES		0.0100	0.0080
01/01/00	SALES TAX		0.0010	0.0090
01/01/00	EXPENSES	0.0100		0.0090
01/01/00	SALES		0.0100	0.0090
01/01/00	SALES TAX		0.0010	0.0100
01/01/00	EXPENSES	0.0100		0.0100
01/01/00	SALES		0.0100	0.0100
01/01/00	SALES TAX		0.0010	0.0110
01/01/00	EXPENSES	0.0100		0.0110
01/01/00	SALES		0.0100	0.0110
01/01/00	SALES TAX		0.0010	0.0120
01/01/00	EXPENSES	0.0100		0.0120
01/01/00	SALES		0.0100	0.0120
01/01/00	SALES TAX		0.0010	0.0130
01/01/00	EXPENSES	0.0100		0.0130
01/01/00	SALES		0.0100	0.0130
01/01/00	SALES TAX		0.0010	0.0140
01/01/00	EXPENSES	0.0100		0.0140
01/01/00	SALES		0.0100	0.0140
01/01/00	SALES TAX		0.0010	0.0150
01/01/00	EXPENSES	0.0100		0.0150
01/01/00	SALES		0.0100	0.0150
01/01/00	SALES TAX		0.0010	0.0160
01/01/00	EXPENSES	0.0100		0.0160
01/01/00	SALES		0.0100	0.0160
01/01/00	SALES TAX		0.0010	0.0170
01/01/00	EXPENSES	0.0100		0.0170
01/01/00	SALES		0.0100	0.0170
01/01/00	SALES TAX		0.0010	0.0180
01/01/00	EXPENSES	0.0100		0.0180
01/01/00	SALES		0.0100	0.0180
01/01/00	SALES TAX		0.0010	0.0190
01/01/00	EXPENSES	0.0100		0.0190
01/01/00	SALES		0.0100	0.0190
01/01/00	SALES TAX		0.0010	0.0200
01/01/00	EXPENSES	0.0100		0.0200
01/01/00	SALES		0.0100	0.0200
01/01/00	SALES TAX		0.0010	0.0210
01/01/00	EXPENSES	0.0100		0.0210
01/01/00	SALES		0.0100	0.0210
01/01/00	SALES TAX		0.0010	0.0220
01/01/00	EXPENSES	0.0100		0.0220
01/01/00	SALES		0.0100	0.0220
01/01/00	SALES TAX		0.0010	0.0230

0.0229 6720. 0.3190 0.3295
NOT NORMAL STRAIN SETBACK JCRIT DCNC
0.0229 6720. 0.3190 0.3295

0.0023	0.020	0.3190	0.3293
0.0046	0.040	0.3190	0.3386
0.0079	0.060	0.3190	0.3479
0.0091	0.070	0.3190	0.3535
0.0503	0.500	0.3190	0.3654

NOT NORMAL STRAIN SSTRESS CURVE DCMC

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

YIELD STRESS IS STRAIN RATE INDEPENDENT STRAIN RATE:	A	B	C
YIELD STRESS = 3380,570	34,953	9603.035	3675.500
SLIP TO YIELD STRESS = 150362,261		147716.	148799.
	A	B	C

PS NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.011	324309.	0.011	256488.	0.011	264032.	0.011	296916.
4	0.023	289236.	0.023	236636.	0.023	257661.	0.023	262470.
6	0.035	245762.	0.035	213097.	0.035	226364.	0.035	233533.
8	0.051	191257.	0.051	164167.	0.051	187059.	0.051	186611.

STATION AT 240 FT OF EAST CLYDE= 0.005

	STRAIL	END DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.005	21747.	316926.	241412.	272007.	266600.	
BASED ON CALCULATED MODULUS ON TEST CURVES			320166.			
BASED ON AVERAGE DESIGN CURVE		6019.621				

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ex clst(RESSTL) '01(ppg571w1) ;(277623-30211.feg-17) 1(taxsst)'
**** LOAD MODULE RELOCATION FACTOR = 84F1E8 *****
CLASS,CSG 12A,10-19-77; J.P.BURKE A37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES--
2
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
2
.01-1000
TEST SPECIMENS-   END POINT STRESS   STRAIN
1 PPG571-1        10186.   0.483
2 PPG571-2        12467.   0.535
3 PPG571-4        10445.   0.214
4 PPG571-5        9732.    0.487
5 PPG571-3        12140.   0.534
                                AVG   STD DEV
FRACTURE STRAINS -----   J.419   0.137
FRACTURE STRESSES ----- 10913.920 1284.185
ORIGINAL CURVES TRUNCATED AT J.062 STRAIN
BASE CURVE IS 1 OF CURVES USED.
NOT NORMAL STRAIN SSTRESS DCRT OCAC
J.0116 3996. 0.3370 0.3699
NOT NORMAL STRAIN SSTRESS DCRT OCAC
J.0116 3996. 0.3370 0.3699
J.0124 4235. 0.3370 0.3503
J.0132 4463. 0.3370 0.3434
J.0140 4592. 0.3370 0.3717
J.0148 4907. 0.3370 0.4358
J.0155 5113. 0.3370 0.4119
NOT NORMAL STRAIN SSTRESS DCRT OCAC
J.0210 6427. 0.3370 0.3563
NOT NORMAL STRAIN SSTRESS DCRT OCAC
J.0210 6427. 0.3370 0.3563
J.0215 6526. 0.3370 0.3633
J.0219 6525. 0.3370 0.3541
NOT NORMAL STRAIN SSTRESS DCRT OCAC
J.0263 7509. 0.3370 0.3528
J.0268 7611. 0.3370 0.3400
NOT NORMAL STRAIN SSTRESS DCRT OCAC
J.0268 7611. 0.3370 0.3400
NOT NORMAL STRAIN SSTRESS DCRT OCAC
J.0535 9984. 0.3370 0.3383
J.0547 10007. 0.3370 0.3568
NOT NORMAL STRAIN SSTRESS DCRT OCAC
J.0547 10007. 0.3370 0.3568
J.0560 10027. 0.3370 0.3327
J.0572 10339. 0.3370 0.3903
J.0585 10645. 0.3370 0.3938
J.0598 10852. 0.3370 0.4047
J.0610 10051. 0.3370 0.3943
J.0623 10942. 0.3370 0.3574
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
                                AVG   STD DEV
YIELD STRESS -----   J.419   0.137
SECANT TO YIELD STRESS ----- 10913.920 1284.185
                                A       B       C
YIELD STRESS ----- 10913.920 1284.185 3541.423 6539.707 9152.925
                                AVG   STD DEV
SECANT TO YIELD STRESS ----- 10913.920 1284.185
                                A       B       C
SECANT TO YIELD STRESS ----- 10913.920 1284.185 3541.423 6539.707 9152.925
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 J.008 356739. J.008 307935. 0.008 327776. 0.008 338462.
4 J.016 325148. J.016 301301. 0.016 310996. 0.016 316218.
6 J.021 306094. 0.021 285469. 0.021 294447. 0.021 298744.
8 J.027 284011. 0.027 265801. 0.027 273204. 0.027 277192.
STRAIN AT 2ND PT ON BASE CURVE= 0.035
                                STRAIN   STD DEV
ELASTIC MODULUS AT J.005 ----- 3759. 346965.
                                A       B       C
ELASTIC MODULUS AT J.005 ----- 3759. 346965. 357182. 353028. 350791.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 347034.
AREA UNDER AVERAGE DESIGN CURVE= 4177.805

```

Figure G49. Computer Run PPG571 (D3)

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```
ex clst(stsstr) 'd1(sko0505) l(tekst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1ED *****
TEKST,CHG 124,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
01 1000
TEST SPECIMENS-   END POINT STRESS   STRAIN
1 SK605-5         12394.   0.558
2 SK605-6         12393.   0.574
3 SK605-7         12639.   0.577
4 SK605-8         12709.   0.576
5 SK605-9         12349.   0.554
                                AVG   STD DEV
FRACTURE STRAINS             = 0.568   0.011
FRACTURE STRESSES            = 12496.740 164.508 11552.299 11936.261 12143.043
ORIGINAL CURVES TRUNCATED AT 0.053 STRAIN
BASE CURVE IS 3 OF CURVES USED.
NOT NORMAL STRAIN SSTRSS DCRIT OCAC
0.0142 4199. 0.3370 0.3466
NOT NORMAL STRAIN SSTRSS DCRIT OCAC
0.0514 9396. 0.3370 0.3426
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
                                AVG   STD DEV
YIELD STRESS                  = 9508.907 126.931 8780.195 9076.452 9238.005
SECANT TO YIELD STRESS        = 150131.939 138627. 143304. 145523.
                                AVG   A   B   C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.003 313583. 0.003 195851. 0.003 243715. 0.003 269492.
4 0.006 315751. 0.006 238556. 0.006 269940. 0.006 286342.
6 0.022 292597. 0.022 69110. 0.022 159968. 0.022 208901.
8 0.029 263497. 0.029 123557. 0.029 183417. 0.029 212962.
STRAIN AT 2ND : ON BASE CURVE= 0.002
                                STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.002 17923. 313423. 215433. 255271. 276726.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 313432.
WARNING-MAX SLOPE(E)= 321027. AT STRAIN= 0.004
AREA UNDER AVERAGE DESIGN CURVE= 5985.388
```

Figure G50. Computer Run SK605 (B4)

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```

ex clst(sssstr) 'c1(sw54102) 1(telest)'
**** LONG MODULUS RELOCATION FACTOR = 0.010 *****
TEST,END 12,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES,2=NO)
?
2
N-SCALE Y-SCALE TO CORRECT GIBLER DIGITISED DATA
?
1 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SW541-2 12634. 0.518
2 SW541-3 12337. 0.540
3 SW541-4 12343. 0.531
      AVG STD DEV A B C
FRACTURE STRAINS = 0.530 0.011 0.412 0.461 0.467
FRACTURE STRESSES = 12524.891 158.512 10852.109 11549.247 11921.592
ORIGINAL CURVES TRUNCATED AT 0.060 STRAIN
END CURVE IS 1 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
      AVG STD DEV A B C
YIELD STRESS = 9729.080 215.004 7459.191 8405.175 8910.432
STRESS TO YIELD STRESS = 16127.613 123619. 133207. 147070.
      AVG B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
1 0.010 336123. 0.010 263370. 0.010 305335. 0.010 317037.
2 0.016 315364. 0.016 284446. 0.016 237331. 0.016 304213.
3 0.021 296641. 0.021 220505. 0.021 257476. 0.021 272418.
4 0.030 265426. 0.030 186928. 0.030 219642. 0.030 237115.
STRAIN AT 2ND PT ON BASE CURVE= 0.010
      STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.010 31114. 364048. 1135569. 814035. 642302.
CHECK ON CALC-REEL MODULUS ON TEST CURVES= 329167.
MIN GIBLER AVERAGE DESIGN CURVE= 5635.494

```

Figure G51. Computer Run SW541 (C2)

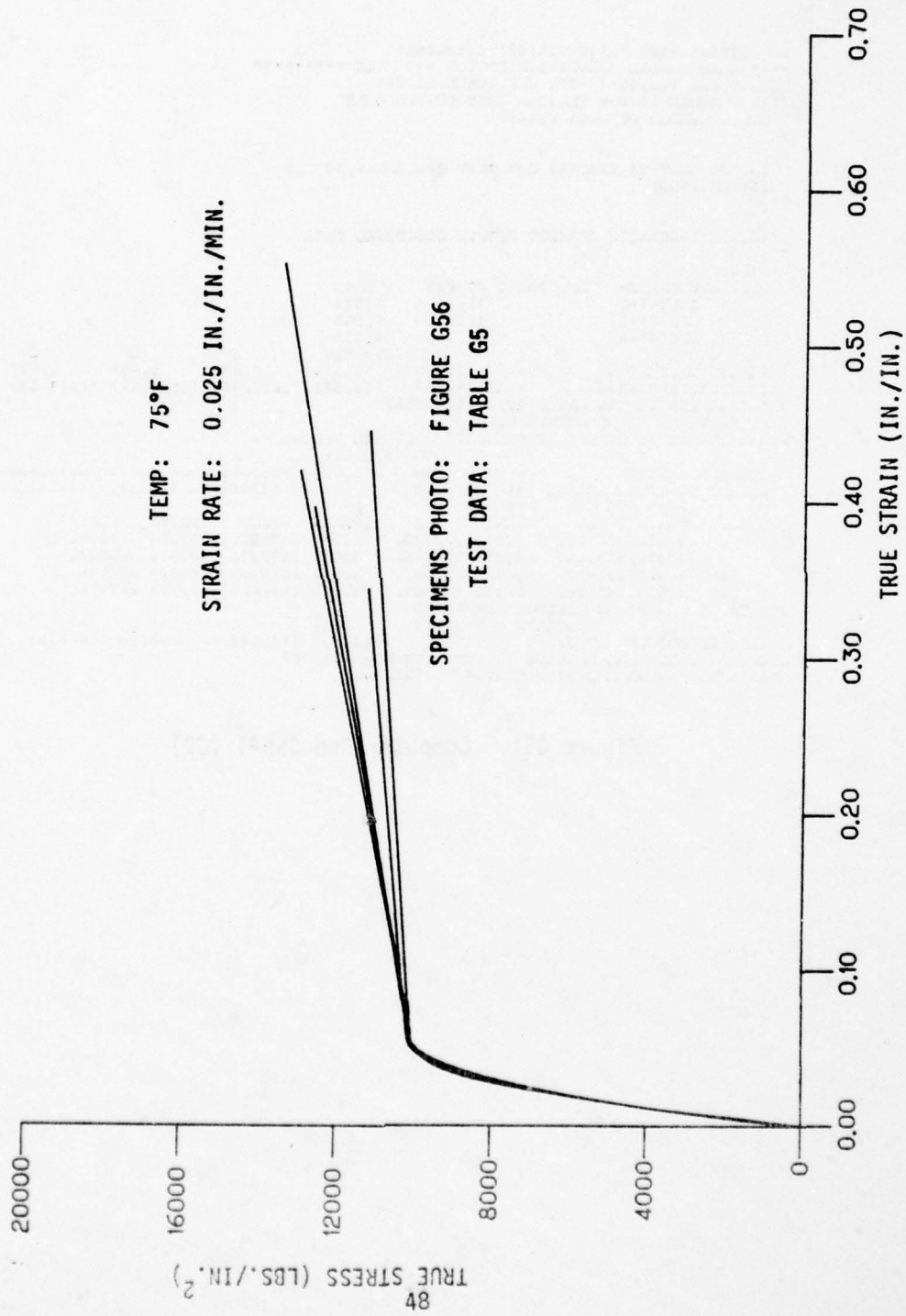


Figure G52 Tensile Test Curves (SK541/F15 - 0.87 Polycarbonate)

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en clst(stsstr) 'c1(sw54102) 1(tekst)'
**** LOAD MODULI RELOCATION FACTOR = 0.01E0 *****
TENSOT,ONG 12,10-19-77; J.F.BURKE R37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES,2=NO)
?
2
N-SCALE Y-SCALE TO CORRECT GERLEN DIGITISED DATA
?
.1 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SW541-2 12634. 0.518
2 SW541-3 12597. 0.540
3 SW541-4 12543. 0.531
AVG STD DEV A B C
FRACTURE STRAINS = 0.530 0.011 0.412 0.461 0.487
FRACTURE STRESSES = 12524.891 158.512 10852.109 11549.247 11921.592
ORIGINAL CURVES TRUNCATED AT 0.060 STRAIN
LAST CURVE IS 2 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AVG STD DEV A B C
YIELD STRESS = 9729.080 215.004 7459.191 8405.175 8910.432
STRESS TO YIELD STRESS = 161237.613 123019. 133207. 147670.
AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.010 336123. 0.010 203370. 0.010 305355. 0.010 317057.
4 0.016 315364. 0.016 284446. 0.016 297331. 0.016 304213.
5 0.021 296621. 0.021 229505. 0.021 257470. 0.021 272416.
6 0.030 265426. 0.030 186928. 0.030 219642. 0.030 237115.
STRAIN AT 2ND PT ON BASE CURVE= 0.010
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.010 31114. 364048. 1135569. 814035. 642302.
CHECK ON CALC-YIELD MODULUS ON TEST CURVES= 329167.
AREA UNDER AVERAGE DESIGN CURVE= 5635.494

```

Figure G51. Computer Run SW541 (C2)

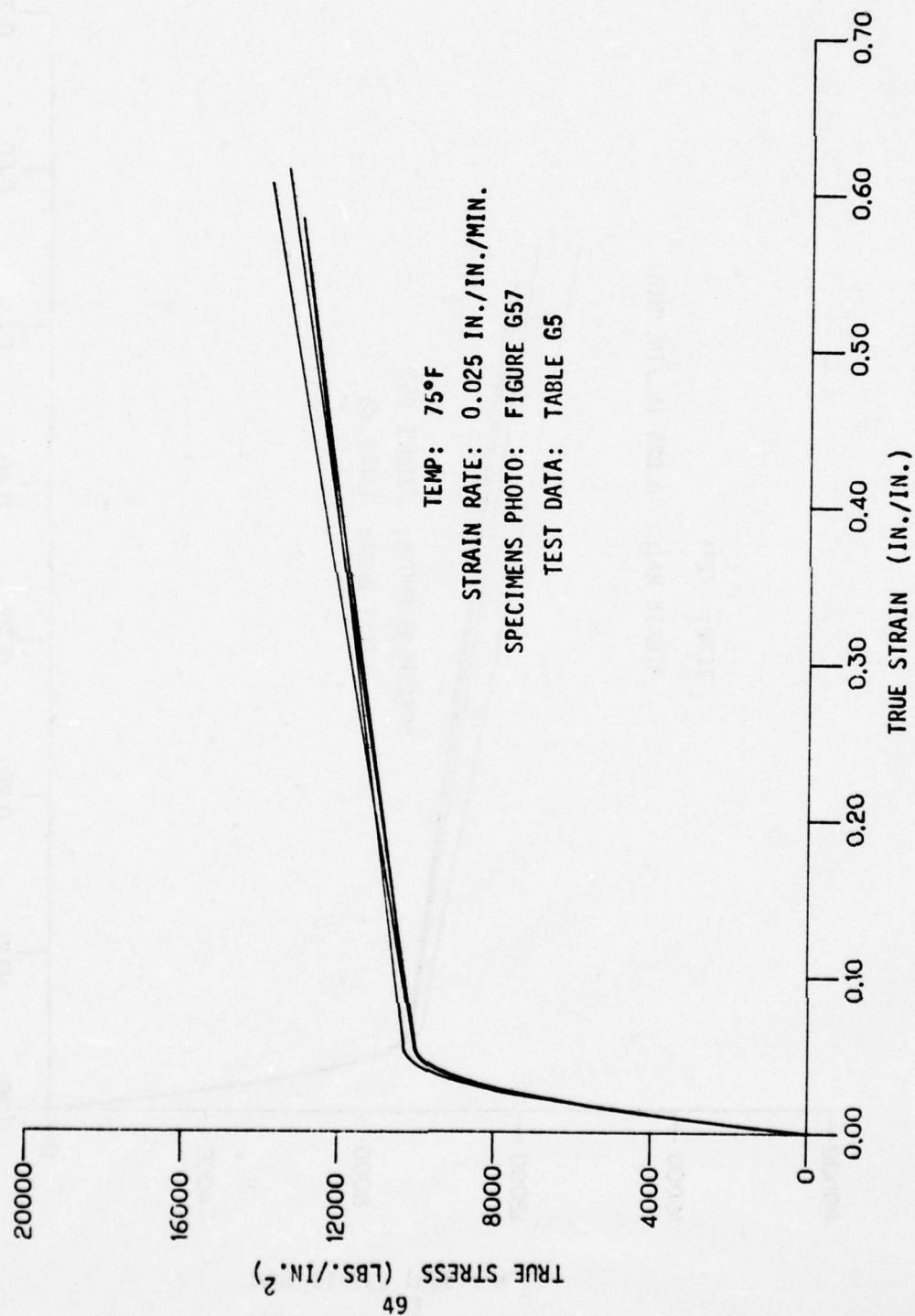


Figure G53. Tensile Test Curves (SK 541 - 0.94 Polycarbonate).

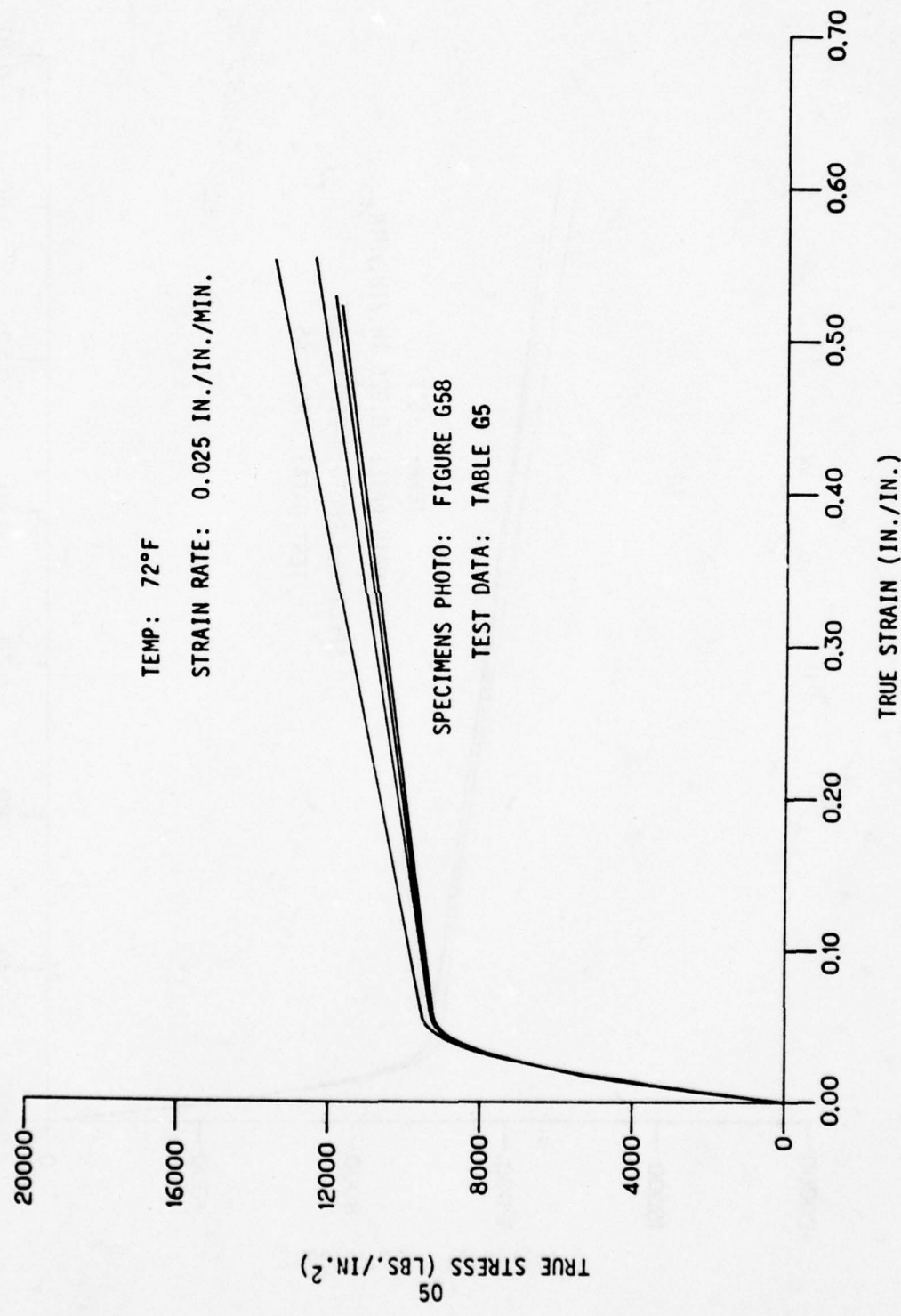


Figure G54. Tensile Test Curves (TEX571-0.50 Polycarbonate).

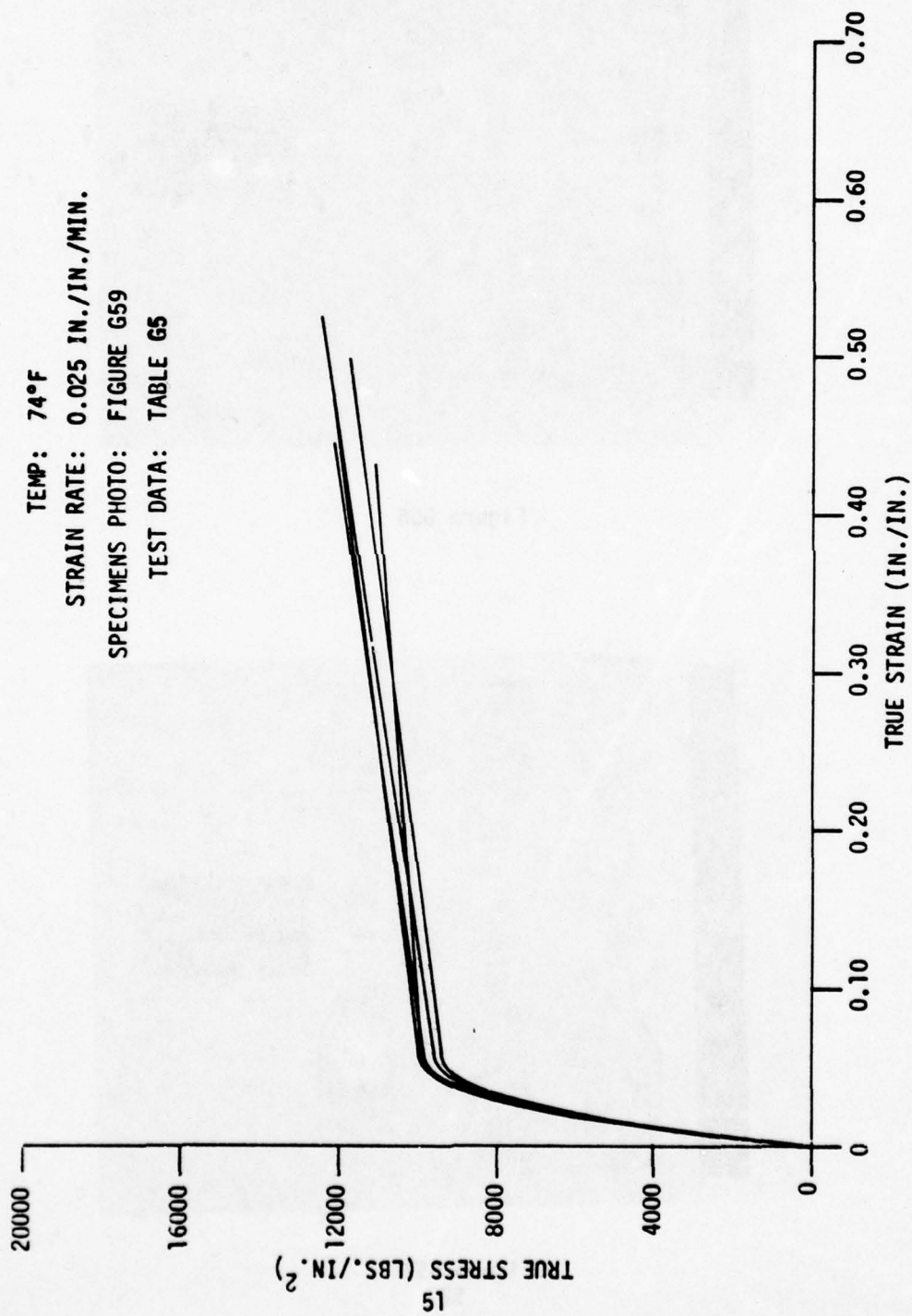


Figure G55. Tensile Test Curves (PPG 571 - 0.50 polycarbonate).

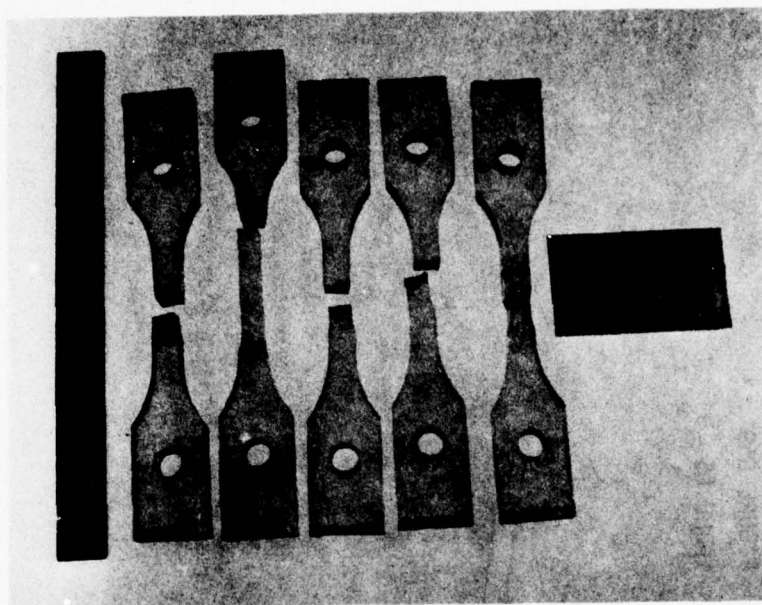


Figure G56

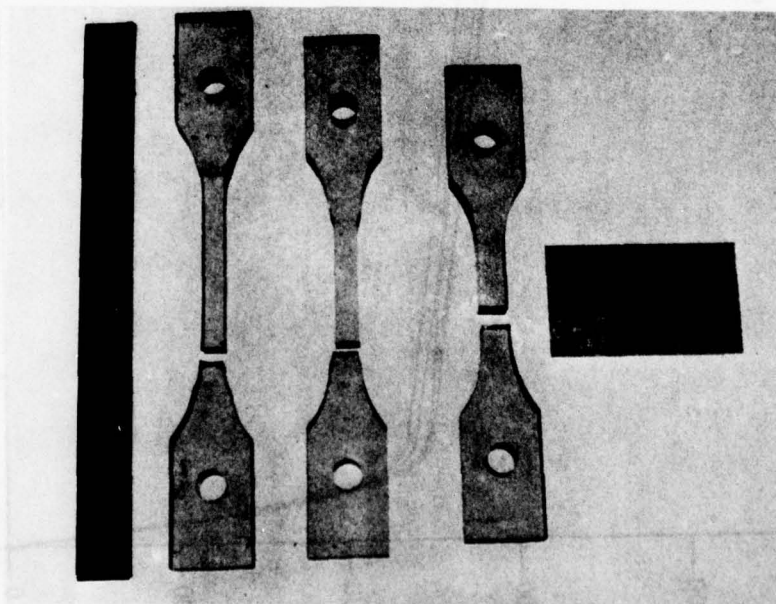


Figure G57

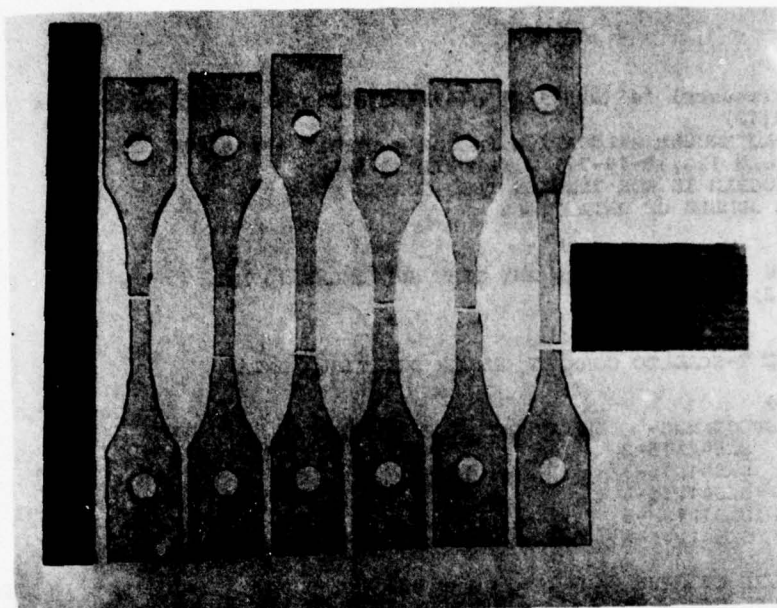


Figure 658

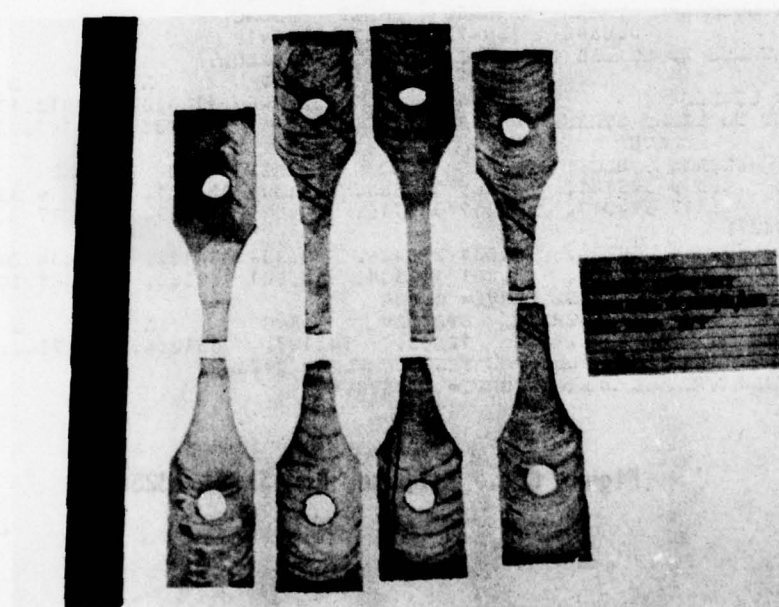


Figure 659

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ex clsg(stsstr) 'd1(sk54102) g(e77623)d0211.feg019) 1(teksst)'
TEST CN(17)
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 *****
TERMIN, CNG 12A, 10-19-77; J.F. BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YLS, 2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GENDER DIGITISED DATA
?
01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SK541F15-2 12956. 0.420
2 SK541F15-3 13396. 0.552
3 SK541F15-4 11222. 0.344
4 SK51F15 -5 12584. 0.397
5 SK541F15-6 11183. 0.445
          AVG STD DEV      A      B      C
FRACTURE STRAINS = 0.432 0.077 -0.010 0.169 0.266
FRACTURE STRESSES = 12268.200 1014.510 6443.896 8111.763 10007.003
ORIGINAL CURVES TRUNCATED AT 0.061 STRAIN
BASE CURVE IS 3 OF CURVES USED.
NOT NORMAL STRAIN STRESS DCRT DCRC
0.0043 1535. 0.3370 0.3404
NOT NORMAL STRAIN STRESS DCRT DCRC
0.0043 1535. 0.3370 0.3404
0.0050 1815. 0.3370 0.4253
0.0058 2072. 0.3370 0.4033
NOT NORMAL STRAIN STRESS DCRT DCRC
0.0546 10047. 0.3370 0.3419
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
          AVG STD DEV      A      B      C
YIELD STRESS = 10001.824 52.746 9789.089 9912.119 9978.420
SLIGHT TO YIELD STRESS = 166345.272 161354. 103503. 104476.
          AVG      A      B      C
PC NO. STRAIN SLC STRAIN SLC STRAIN SLC STRAIN SLC
2 0.009 343141. 0.009 310608. 0.009 323001. 0.009 337507.
4 0.017 314017. 0.017 301719. 0.017 306041. 0.017 305899.
TEST CN(17)
6 0.034 234730. 0.034 223436. 0.034 236102. 0.034 243010.
8 0.061 106345. 0.061 101354. 0.061 103303. 0.061 104476.
STRAIN AT 2ND PT ON BASE CURVE= 0.004
          STRAIN STD DEV      AVG      A      B      C
BENETIC MODULUS AT 0.004 12065. 342107. 351264. 347000. 345583.
CHECK ON CIRC-TRN MODULUS ON TEST CURVES= 342303.
AREA UNDER AVERAGE DESIGN CURVE= 4578.631

```

Figure G60. Computer Run SK541 (B2SA)

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ex clst(stsstr) 'd4(sk54404) 1(tekst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF4EO *****
TEKSST,CHG 42A,40-40-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,40 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.04 4000
TEST SPECIMENS-    END POINT STRESS    STRAIN
1 SK544-4          12000.    0.503
2 SK544-2          12003.    0.503
3 SK544-3          13363.    0.605
4 SK544-6          13706.    0.605

          AVG    STD DEV    A    B    C
FRACTURE STRAINS    =    0.506    0.046    0.400    0.530    0.554
FRACTURE STRESSES    = 13202.650    370.000    10615.005    11706.005    12200.002
ORIGINAL CURVES TRUNCATED AT 0.057 STRAIN
BASE CURVE IS 3 OF CURVES USED.
NOT NORMAL    STRAIN    SSTRESS    DCRIT    DCAC
0.0300    9300.    0.3000    0.3000
0.0300    9452.    0.3000    0.3000
0.0406    9547.    0.3000    0.3000
0.0405    9503.    0.3000    0.3000
0.0420    9600.    0.3000    0.3000
0.0433    9700.    0.3000    0.3000
NOT NORMAL    STRAIN    SSTRESS    DCRIT    DCAC
0.0433    9700.    0.3000    0.3000
0.0453    9802.    0.3000    0.3000
0.0475    9900.    0.3000    0.3000
0.0497    9967.    0.3000    0.4000
0.0520    10000.    0.3000    0.4000
0.0540    10035.    0.3000    0.4000
0.0572    10040.    0.3000    0.4000
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
          AVG    STD DEV    A    B    C
YIELD STRESS    = 10405.073    433.407    9465.700    9550.250    9750.377
SECANT TO YIELD STRESS    = 176700.833    460353.    167070    170605.
          AVG    A    B    C
PC NO.    STRAIN    SEC    STRAIN    SEC    STRAIN    SEC    STRAIN    SEC
2    0.007    363044.    0.007    293002.    0.007    321750.    0.007    337072.
4    0.043    330455.    0.043    290050.    0.043    310052.    0.043    320030.
6    0.025    297500.    0.025    250023.    0.025    270000.    0.025    280020.
8    0.033    265240.    0.033    230007.    0.033    240000.    0.033    250000.
STRAIN AT 2ND PT ON BASE CURVE= 0.003
          STRAIN    STD DEV    AVG    A    B    C
ELASTIC MODULUS AT 0.003    40322.    365020.    293002.    322523.    330000.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 365050.
AREA UNDER AVERAGE DESIGN CURVE= 6707.000
```

Figure G61. Computer Run SK541 (B2)

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ex clst(stsstr) 'd1(tex57103) l(tekst)'
**** LOAD MODULE RELOCATION FACTOR = 0AE1EO *****
TEKSST,CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS-   END POINT STRESS   STRAIN
1  TEX571-3       12405.   0.553
2  TEX571-4       11699.   0.522
3  TEX571-5       11878.   0.528
4  TEX571-76      13456.   0.552
              AVG   STD DEV
FRACTURE STRAINS   =   0.539   0.016
FRACTURE STRESSES  = 12359.500  789.935
ORIGINAL CURVES TRUNCATED AT 0.061 STRAIN
BASE CURVE IS 2 OF CURVES USED.
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0297 7457. 0.3810 0.4006
0.0307 7593. 0.3810 0.4310
0.0317 7746. 0.3810 0.3825
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0317 7746. 0.3810 0.3825
0.0362 8298. 0.3810 0.3829
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0362 8298. 0.3810 0.3829
0.0404 8672. 0.3810 0.3908
0.0416 8753. 0.3810 0.4020
0.0428 8836. 0.3810 0.3912
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0428 8836. 0.3810 0.3912
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0580 9307. 0.3810 0.3819
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
              AVG   STD DEV
YIELD STRESS   = 9362.065  138.727
SECANT TO YIELD STRESS = 152872.383
              AVG   B
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.008 316738. 0.008 244252. 0.008 273897. 0.008 289790.
4 0.017 295656. 0.017 248503. 0.017 267787. 0.017 278126.
6 0.020 287598. 0.020 262899. 0.020 273000. 0.020 278416.
8 0.026 263645. 0.026 255827. 0.026 259024. 0.026 260738.
STRAIN AT 2ND PT ON BASE CURVE= 0.005
              STRAIN STD DEV
ELASTIC MODULUS AT 0.005 5581. 308778. 272189. 287153. 295175.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 308791.
AREA UNDER AVERAGE DESIGN CURVE= 5590.015

```

Figure G62. Computer Run TEX571 (A3)

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ex clst(stsstr) 'd1(ppg571a1) l(teksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1EO *****
TEKSST,CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS-   END POINT STRESS   STRAIN
1 PPG571-1         11778.         0.498
2 PPG571-2         12500.         0.524
3 PPG571-3         12180.         0.472
4 PPG571-4         12167.         0.444
5 PPG571-5         11125.         0.431
                                AVG   STD DEV
FRACTURE STRAINS           = 0.474   0.038
FRACTURE STRESSES          = 11950.300 527.439
ORIGINAL CURVES TRUNCATED AT 0.061 STRAIN
BASE CURVE IS 1 OF CURVES USED.
NOT NORMAL   STRAIN   SSTRSS   DCRIT   DCAC
              0.0016   587.    0.3370  0.3413
              0.0021   782.    0.3370  0.3372
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
                                AVG   STD DEV
YIELD STRESS              = 9780.246 245.292
SECANT TO YIELD STRESS     = 159920.266
                                A       B       C
                                8372.027 8944.538 9252.869
                                136894. 146255. 151297.
PC NO.   STRAIN   SEC   STRAIN   SEC   STRAIN   SEC   STRAIN   SEC
2 0.006 361243. 0.006 275982. 0.006 310645. 0.006 329313.
4 0.015 323627. 0.015 274144. 0.015 294261. 0.015 305095.
6 0.033 254912. 0.033 210398. 0.033 228495. 0.033 238242.
8 0.061 159920. 0.061 136894. 0.061 146255. 0.061 151297.
STRAIN AT 2ND PT ON BASE CURVE= 0.003
                                STRAIN   STD DEV   AVG   A       B       C
ELASTIC MODULUS AT 0.003   12882. 364072. 297207. 324391. 339031.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 364092.
AREA UNDER AVERAGE DESIGN CURVE= 4910.327

```

Figure G63. Computer Run PPG571 (D3)

TABLE G1 TENSILE TEST DATA

TEST MEASUREMENT DATA										TEST CALCULATIONS DATA				
TEST SPECIMEN NUMBER	TEST TEMP (°F)	LOAD RATE (IN./MIN.)	GAGE LENGTH (IN.)	SPECIMEN LENGTH		GAGE AREA		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	STRAIN RATE (IN./IN./MIN.)	PERCENT ELASTIC ELONG. TO YIELD	PERCENT PLASTIC ELONG. TO RUPTURE	TRUE RUPTURE STRESS ₀ (LBS/IN ²)	TRUE RUPTURE STRAIN (IN./IN.)
				BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)							
81-1	76	.050	2.00	4.000	7.210	.1254	----	1152	----	.025	5.0	143	----	----
81-2	76	.050	2.00	4.000	7.295	.1236	.0692	1150	----	.025	5.0	146	----	----
81-3	76	.050	2.00	4.000	6.940	.1244	.0734	1158	----	.025	6.0	131	----	----
81-4	76	.050	2.00	4.000	6.940	.1244	.0732	1153	----	.025	5.0	118	----	----
81-5	76	.050	2.00	4.000	7.000	.1246	.0800	1158	----	.025	5.0	133	----	----
81-6	76	.050	2.00	4.000	5.687	.1241	.0755	1153	----	.025	5.0	75	----	----
82-1	76	.050	2.00	4.000	7.280	.1245	.0701	1162	----	.025	6.0	146	----	----
82-2	76	.050	2.00	4.000	7.350	.1249	.0722	1160	----	.025	5.0	149	----	----
82-3	76	.050	2.00	4.000	7.395	.1250	.0703	1174	----	.025	5.0	151	----	----
82-4	76	.050	2.00	4.000	7.550	.1241	.0714	1162	----	.025	5.0	158	----	----
82-5	76	.050	2.00	4.000	7.080	.1237	.0722	1163	----	.025	5.0	137	----	----
82-6	76	.050	2.00	4.000	5.610	.1256	----	1158	----	.025	5.0	72	----	----
83-1	76	.050	2.00	4.000	4.470	.1221	.0960	1163	----	.025	5.0	21	----	----
83-2	76	.050	2.00	4.000	6.970	.1240	.0720	1178	----	.025	5.0	132	----	----
83-3	76	.050	2.00	4.000	5.375	.1237	.0770	1177	----	.025	5.0	61	----	----
83-4	76	.050	2.00	4.000	4.375	.1237	.1200	1182	----	.025	5.0	17	----	----
83-5	76	.050	2.00	4.000	6.000	.1231	.0740	1170	----	.025	5.0	89	----	----
83-6	76	.050	2.00	4.000	5.000	.1247	----	1183	----	.025	4.9	44	----	----
84-1	76	.050	2.00	4.000	7.190	.1242	.0695	1185	----	.025	5.2	142	----	----
84-2	76	.050	2.00	4.000	6.795	.1238	.0734	1179	----	.025	5.1	124	----	----
84-3	76	.050	2.00	4.000	7.355	.1231	.0691	1168	----	.025	5.1	149	----	----
84-4	76	.050	2.00	4.000	7.400	.1248	.0678	1182	----	.025	5.1	151	----	----
84-5	76	.050	2.00	4.000	5.425	.1254	.0771	1189	----	.025	5.1	63	----	----

TABLE G2 TENSILE TEST DATA

TEST MEASUREMENT DATA										TEST CALCULATIONS DATA				
TEST SPECIMEN NUMBER	TEST TEMP (°F)	LOAD RATE (IN./MIN)	GAGE LENGTH (IN.)	SPECIMEN LENGTH		GAGE AREA		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	STRAIN RATE (IN./IN./MIN)	PERCENT ELONG. TO YIELD	PERCENT PLASTIC ELONG. TO RUPTURE	TRUE RUPTURE STRESS (LBS/IN ²)	TRUE RUPTURE STRAIN (IN./IN.)
				BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)							
85-1	76	.050	2.00	4.000	4.610	.1235	.0773	1167	----	.025	5.0	27	----	----
85-2	76	.050	2.00	4.000	4.675	.1253	.0778	1187	----	.025	5.0	30	----	----
85-3	76	.050	2.00	4.000	4.820	.1242	.0783	1176	----	.025	5.0	36	----	----
85-4	76	.050	2.00	4.000	4.475	.1240	.0779	1175	----	.025	5.0	21	----	----
85-5	76	.050	2.00	4.000	7.155	.1225	.0701	1159	----	.025	5.0	140	----	----
85-6	76	.050	2.00	4.000	6.605	.1222	----	1150	----	.025	5.3	116	----	----
86-1	76	.050	2.00	4.000	6.980	.1242	.0740	1183	----	.025	5.0	132	----	----
86-2	76	.050	2.00	4.000	7.820	.1242	.0648	1182	----	.025	4.9	170	----	----
86-3	76	.050	2.00	4.000	5.140	.1245	.0746	1187	----	.025	4.7	51	----	----
86-4	76	.050	2.00	4.000	7.130	.1231	.0711	1170	----	.025	4.9	139	----	----
86-5	76	.050	2.00	4.000	5.265	.1241	.0740	1178	----	.025	5.1	56	----	----
T1-1	76	.050	2.00	4.000	6.875	.1208	.0675	1090	1135	.025	4.8	128	16815	.5820
T1-2	76	.050	2.00	4.000	7.125	.1230	.0664	1100	1185	.025	4.8	139	17846	.6165
T1-3	76	.050	2.00	4.000	7.313	.1212	.0665	1095	1188	.025	4.8	147	17865	.6002
T1-4	76	.050	2.00	4.000	7.500	.1211	.0653	1098	1200	.025	4.8	156	18378	.6176
T1-5	76	.050	2.00	4.000	7.000	.1190	.0691	1085	1137	.025	4.3	133	16454	.5436
T1-6	76	.050	2.00	4.000	7.125	.1229	.0681	1115	1225	.025	4.8	139	17990	.5904
T2-1	76	.050	2.00	4.000	7.000	.1232	.0695	1120	1155	.025	4.8	133	16619	.5725
T2-2	76	.050	2.00	4.000	6.938	.1223	.0696	1112	1123	.025	4.5	131	16135	.5637
T2-3	76	.050	2.00	4.000	7.000	.1235	.0717	1125	1150	.025	4.3	133	16019	.5438
T2-4	76	.050	2.00	4.000	7.375	.1200	.0659	1093	1182	.025	4.7	150	17936	.5994
T2-5	76	.050	2.00	4.000	6.875	.1241	.0700	1128	1130	.025	5.0	128	16143	.5723
T2-6	76	.050	2.00	4.000	7.230	.1201	.0680	1110	1160	.025	4.8	144	17059	.5693

TABLE G3 TENSILE TEST DATA

TEST MEASUREMENT DATA										TEST CALCULATIONS DATA				
TEST SPECIMEN NUMBER	TEST TEMPERATURE (°F)	LOAD RATE (IN./MIN)	GAGE LENGTH (IN.)	SPECIMEN LENGTH		GAGE AREA		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	STRAIN RATE (IN./IN.-MIN)	PERCENT ELASTIC ELONG. TO YIELD	PERCENT PLASTIC ELONG. TO RUPTURE	TRUE RUPTURE STRESS (LBS/IN ²)	TRUE RUPTURE STRAIN (IN./IN.)
				BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)							
T3-1	76	.050	2.00	4.000	6.750	.1214	.0710	1125	1080	.025	4.1	122	15211	.5364
T3-2	76	.050	2.00	4.000	7.000	.1211	.0676	1111	1127	.025	4.3	133	16672	.5830
T3-3	76	.050	2.00	4.000	6.750	.1252	.0730	1148	1142	.025	4.3	122	15642	.5395
T3-4	76	.050	2.00	4.000	7.000	.1210	.0650	1110	1123	.025	4.2	133	17272	.6214
T3-5	76	.050	2.00	4.000	6.687	.1232	.0703	1125	1080	.025	4.2	119	15363	.5610
T3-6	76	.050	2.00	4.000	6.625	.1224	.0721	1120	1073	.025	4.3	117	14878	.5292
T4-1	72	.050	2.00	4.00	6.750	.1208	.0694	1115	1082	.025	4.3	122	15593	.5542
T4-2	72	.050	2.00	4.00	5.875	.1230	.0734	1123	891	.025	4.3	83	12139	.5163
T4-3	72	.050	2.00	4.00	7.188	.1239	.0730	1133	975	.025	4.7	142	13361	.5290
T4-4	72	.050	2.00	4.00	7.375	.1219	.0653	1125	1200	.025	4.3	150	18382	.6242
T4-5	72	.050	2.00	4.00	6.500	.1231	.0729	1123	1005	.025	4.3	111	13786	.5239
T4-6	72	.050	2.00	4.00	7.125	.1210	.0728	1113	1092	.025	4.3	139	14999	.5081
T5-1	72	.050	2.00	4.00	7.000	.1203	.0647	1095	1110	.025	4.3	133	17156	.6202
T5-3	72	.050	2.00	4.00	6.813	.1228	.0684	1117	1110	.025	4.3	125	16228	.5852
T5-4	72	.050	2.00	4.00	7.313	.1217	.0633	1098	1102	.025	4.3	147	17409	.6537
T5-5	72	.050	2.00	4.00	6.625	.1210	.0648	1090	1038	.025	3.9	117	16019	.6245
T5-6	72	.050	2.00	4.00	6.750	.1198	.0636	1090	1078	.025	4.3	122	16050	.6332
T6-1	72	.050	2.00	4.00	6.750	.1225	.0701	1145	1125	.025	3.9	122	16049	.5582
T6-2	72	.050	2.00	4.00	7.063	.1224	.0694	1135	1080	.025	4.3	136	15562	.5592
T6-3	72	.050	2.00	4.00	5.375	.1245	.0757	1137	855	.025	4.3	61	11295	.4975
T6-4	72	.050	2.00	4.00	7.000	.1210	.0692	1113	1080	.025	4.3	133	15607	.5588
T6-5	72	.050	2.00	4.00	6.938	.1233	.0698	1128	1092	.025	4.3	131	15645	.5690
T6-6	72	.050	2.00	4.00	6.875	.1243	.0721	1137	1105	.025	4.3	128	15326	.5446

TABLE G4 TENSILE TEST DATA

TEST MEASUREMENT DATA										TEST CALCULATIONS DATA				
TEST SPECIMEN NUMBER	TEST TEMP (°F)	LOAD RATE (IN./MIN)	GAGE LENGTH (IN.)	SPECIMEN LENGTH		GAGE AREA		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	STRAIN RATE (IN./IN./MIN)	PERCENT ELASTIC ELONG. TO YIELD	PERCENT PLASTIC ELONG. TO RUPTURE	TRUE RUPTURE STRESS (LBS/IN. ²)	TRUE RUPTURE STRAIN (IN./IN.)
				BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)							
A4 TC1	75	.050	2.00	4.500	4.875	.2801	.1869	3280	2350	.025	4.42	17	12574	.4048
A4 TC2	75	.050	2.00	4.500	4.875	.3436	.2006	3150	2460	.025	3.50	17	12263	.5383
A4 TC3	75	.050	2.00	4.500	4.875	.3181	.2202	3270	2400	.025	4.04	17	10899	.3681
A4 TC4	75	.050	2.00	4.500	4.625	.3189	.2174	3230	2400	.025	3.56	6	11039	.3331
A4 TC5	75	.050	2.00	4.500	4.625	.3320	.2181	3380	2400	.025	4.00	6	11007	.4206
A4-1	76	.050	2.00	4.500	4.938	.3607	.2082	3640	2550	.025	4.13	19	12251	.5497
A4-2	76	.050	2.00	4.500	5.000	.3576	.2009	3600	2520	.025	4.04	22	12542	.5766
A4-3	76	.050	2.00	4.500	5.125	.3561	.1981	3590	2520	.025	4.44	28	12722	.5866
A4-4	76	.050	2.00	4.500	6.000	.3471	.1945	3490	2460	.025	3.60	28	12648	.5790
A4-5	76	.050	2.00	4.500	5.000	.3505	.2018	3510	2490	.025	4.41	22	12337	.5520
A4-6	76	.050	2.00	4.500	6.125	.3304	.1956	3320	2340	.025	3.62	72	11963	.5241
D3-1	75	.050	2.00	4.500	4.750	.3700	.2474	3720	2520	.025	4.73	33	10186	.4025
D3-2	75	.050	2.00	4.500	5.125	.3712	.2174	3730	2710	.025	4.27	28	12466	.5350
D3-3	75	.050	2.00	4.500	4.875	.3695	.2166	3730	2630	.025	4.24	17	12140	.5340
D3-4	75	.050	2.00	4.500	4.563	.3699	.2087	3725	3000	.025	4.58	3	10044	.2138
D3-5	75	.050	2.00	4.500	4.625	.3706	.2466	3720	2400	.025	3.76	6	9732	.4074
B4-5	72	.050	2.00	4.500	4.781	.3680	.2106	3620	2610	.025	4.31	13	12393	.5581
B4-6	72	.050	2.00	4.500	4.656	.3740	.2106	3630	2610	.025	4.38	7	12393	.5743
B4-7	72	.050	2.00	4.469	5.000	.3721	.2089	3650	2640	.025	5.22	24	12638	.5773
B4-8	72	.050	2.00	4.656	4.906	.3724	.2093	3645	2660	.025	4.31	11	12709	.5762
B4-9	72	.050	2.00	4.500	5.031	.3701	.2126	3610	2625	.025	4.27	24	12349	.5544

TABLE G5 TENSILE TEST DATA

TEST MEASUREMENT DATA										TEST CALCULATIONS DATA				
TEST SPECIMEN NUMBER	TEST TEMP (°F)	LOAD RATE (IN./MIN)	GAGE LENGTH (IN.)	SPECIMEN LENGTH		GAGE AREA		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	STRAIN RATE (IN./IN.-/MIN)	PERCENT ELASTIC ELONG. TO YIELD	PERCENT PLASTIC ELONG. TO RUPTURE	TRUE RUPTURE STRESS (LBS/IN ²)	TRUE RUPTURE STRAIN (IN./IN.)
				BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)							
C2-2	75	.050	2.00	4.500	5.760	.6520	.3631	6550	4875	.025	4.52	56	12728	.5320
C2-3	75	.050	2.00	4.500	6.125	.6586	.3782	6600	4800	.025	4.63	72	12692	.5547
C2-4	75	.050	2.00	4.500	5.750	.6463	.3744	6500	4650	.025	4.40	56	12420	.5459
C2-5	75	.050	2.00	4.500	4.875	.6616	.4175	6625	4565	.025	4.67	17	10934	.4604
C2-6	75	.050	2.00	4.500	5.000	.6514	.4198	6525	4500	.025	4.21	22	10719	.4393
B2SA-2	75	.050	2.00	4.500	4.656	.6433	.4226	6525	5475	.025	4.76	7	12956	.4201
B2SA-3	75	.050	2.00	4.500	6.063	.6420	.3695	6525	4950	.025	4.29	69	13396	.5524
B2SA-4	75	.050	2.00	4.563	4.750	.6319	.4478	6475	5025	.025	4.31	8	11222	.3444
B2SA-5	75	.050	2.00	4.563	4.875	.6380	.4291	6475	5400	.025	4.38	14	12584	.3967
B2SA-6	75	.050	2.00	4.563	4.813	.6491	.4158	6600	4650	.025	4.40	11	11183	.4454
B2-1	75	.050	2.00	4.50	5.563	.7101	.3965	7375	5150	.025	4.24	47	12988	.5827
B2-2	75	.050	2.00	4.50	5.188	.7148	.4002	7375	5200	.025	4.22	31	12994	.5831
B2-3	75	.050	2.00	4.50	6.125	.7125	.3854	7350	5150	.025	4.60	72	13363	.6145
B2-6	75	.050	2.00	4.50	6.438	.7107	.3881	7350	5350	.025	4.23	86	13785	.6050
A3-3	72	.050	2.00	4.563	6.750	.3672	.2112	3540	2620	.025	4.40	97	12405	.5533
A3-4	72	.050	2.00	4.563	5.063	.3651	.2167	3490	2535	.025	4.31	22	11698	.5217
A3-5	72	.050	2.00	4.531	5.250	.3711	.2189	3540	2600	.025	4.35	32	11878	.5283
A3-6	72	.050	2.00	4.531	6.750	.3613	.2081	3570	2800	.025	4.35	99	13455	.5517
D3-1	74	.050	2.00	4.000	5.375	.3562	.2165	3550	2550	.025	4.68	61	11778	.4979
D3-2	74	.050	2.00	4.000	5.750	.3568	.2112	3580	2640	.025	4.66	78	12499	.5244
D3-3	74	.050	2.00	4.000	5.213	.3632	.2266	3770	2760	.025	4.66	81	12180	.4718
D3-4	74	.050	2.00	4.000	6.063	.3615	.2318	3735	2820	.025	4.22	92	12166	.4443
D3-5	74	.050	2.00	4.000	5.125	.3652	.2373	3750	2640	.025	4.24	50	11125	.4311

APPENDIX H
LOW STRAIN RATE TENSILE
TEST DATA
(SECTION V, PART 1)

The following test data are presented for use in conjunction with material property data presented in the following tables of Section V (Part 1).

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Test Stress-Strain Curves - Figures H121 through H124	166 - 169
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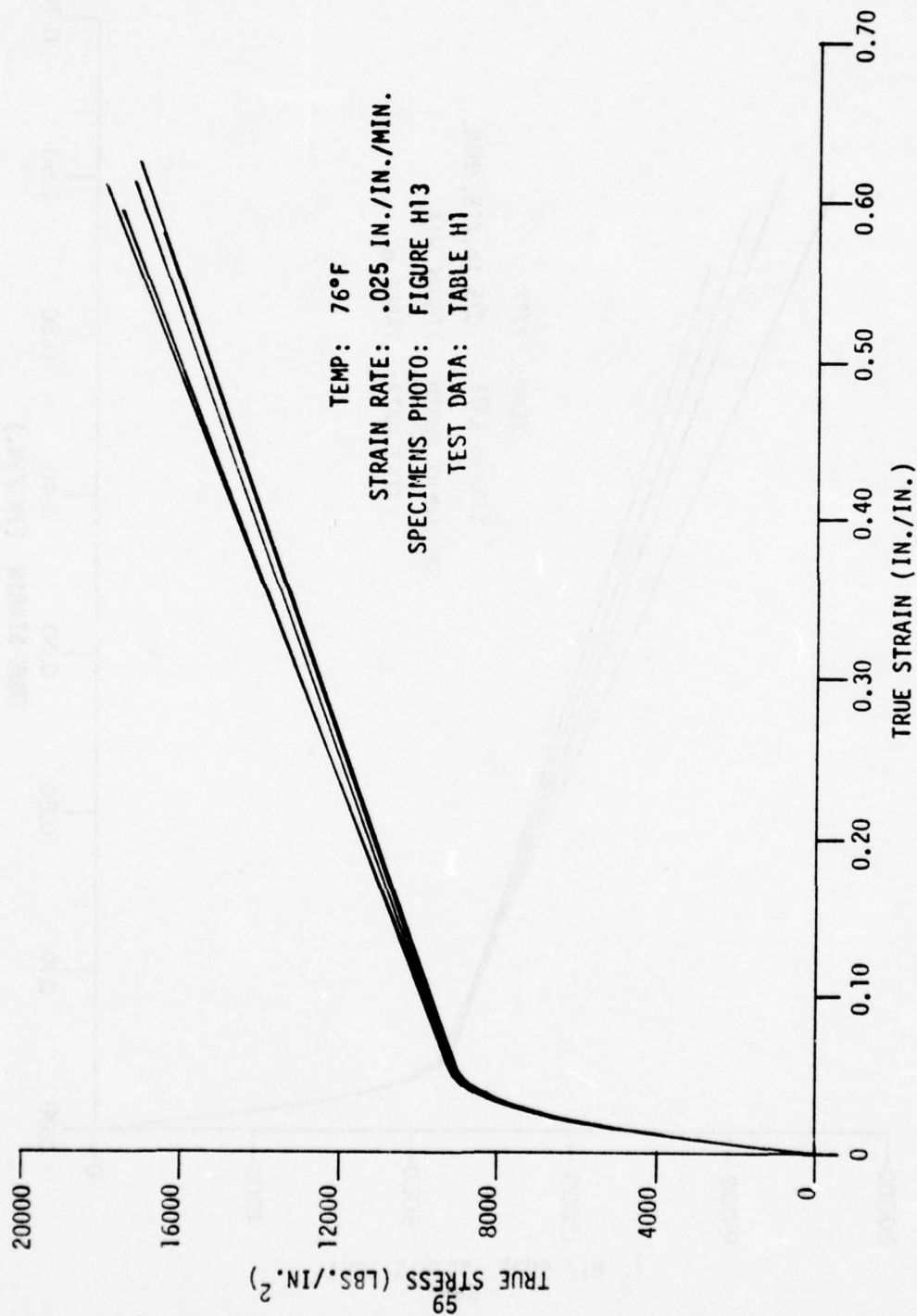


Figure H1. Tensile Test Curves (PPG 517 - 0.188 Polycarbonate).

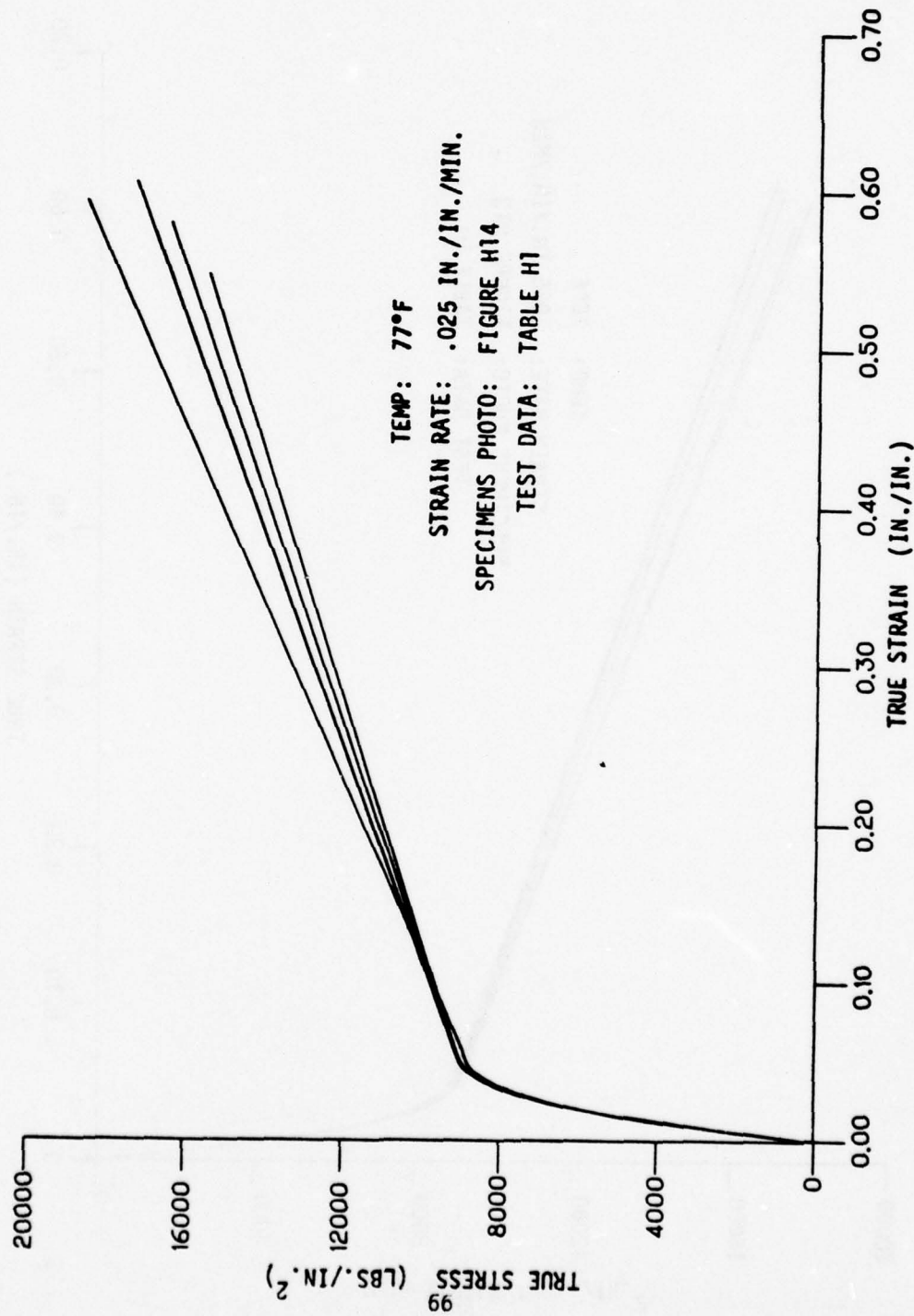


Figure H2. Tensile Test Curves (PPG 517 - 0.188 Polycarbonate).

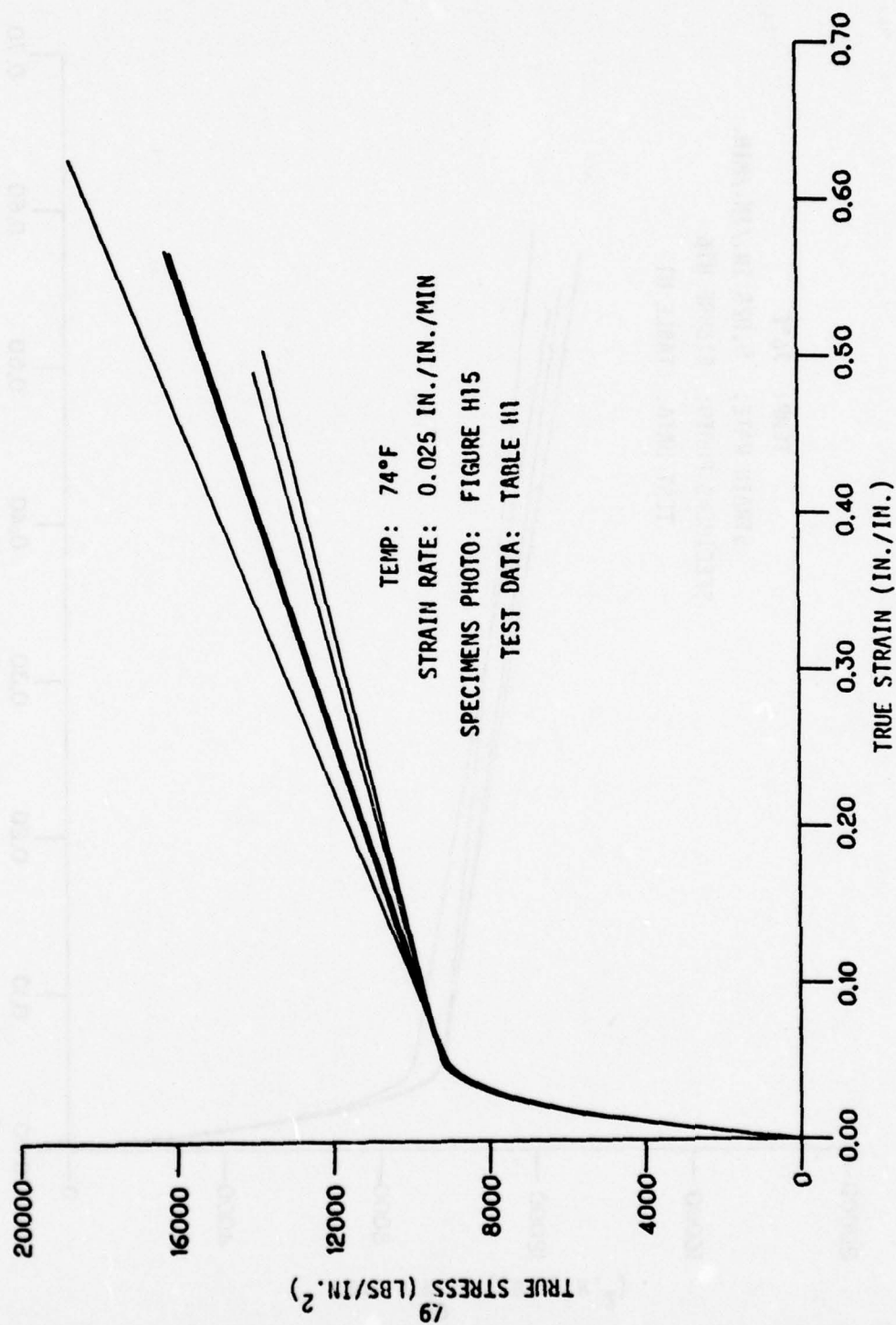


Figure H3 Tensile Test Curves (PP6517D - 0.19 polycarbonate).

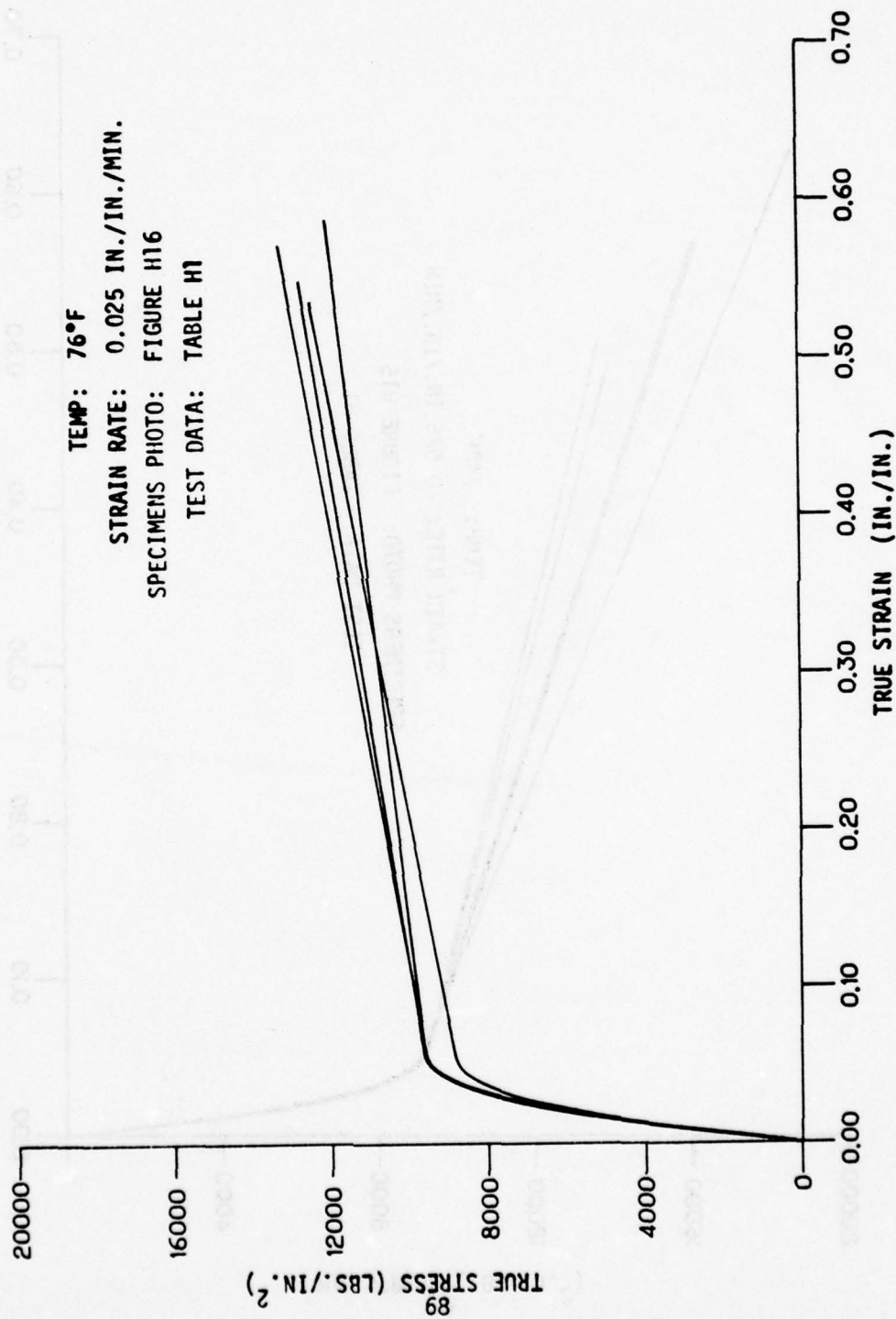


Figure H4 Tensile Test Curves (SK 507 - 0.87 Polycarbonate).

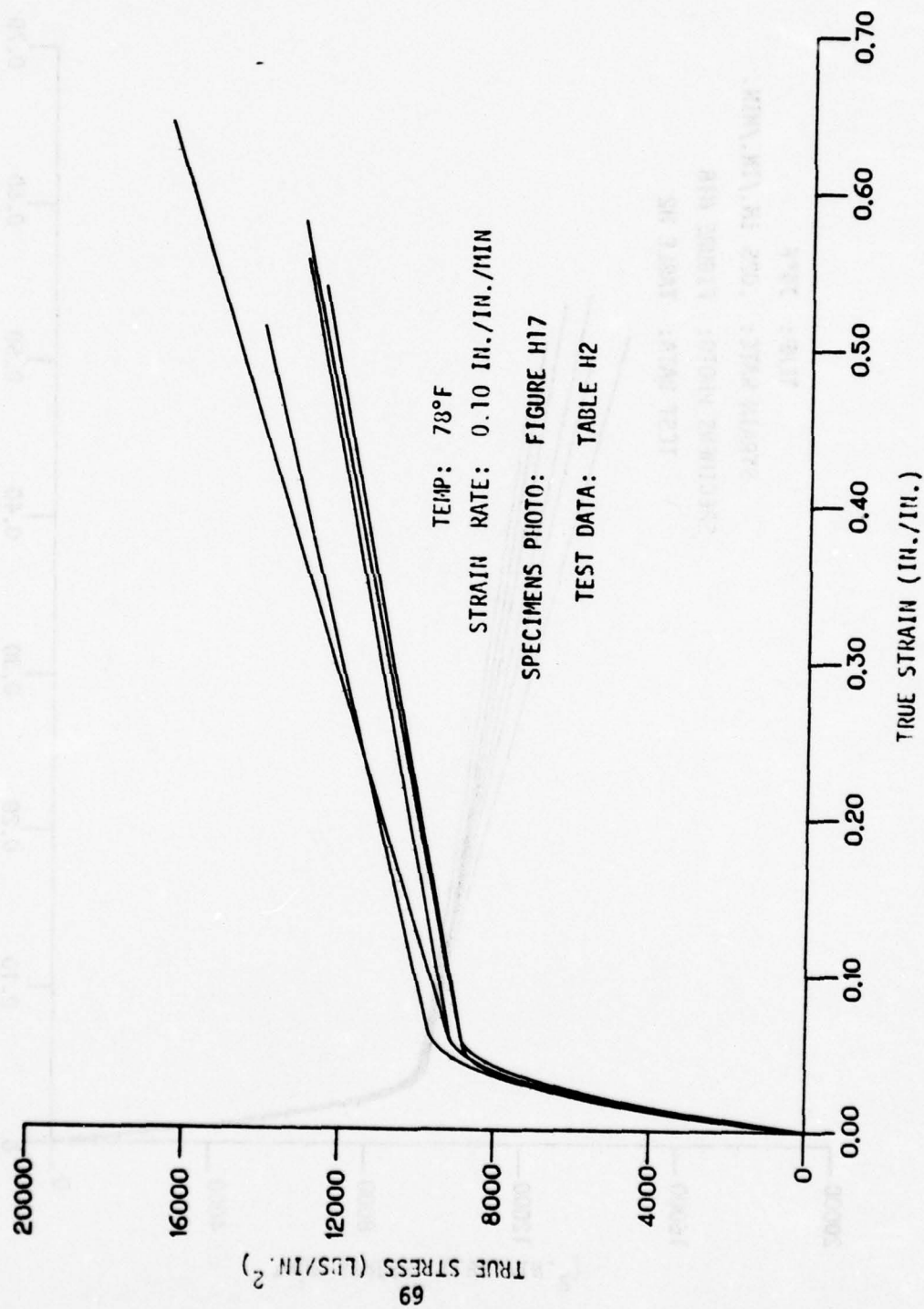


Figure H5. Tensile Test Curves (SK509 - 0.150 Polycarbonate).

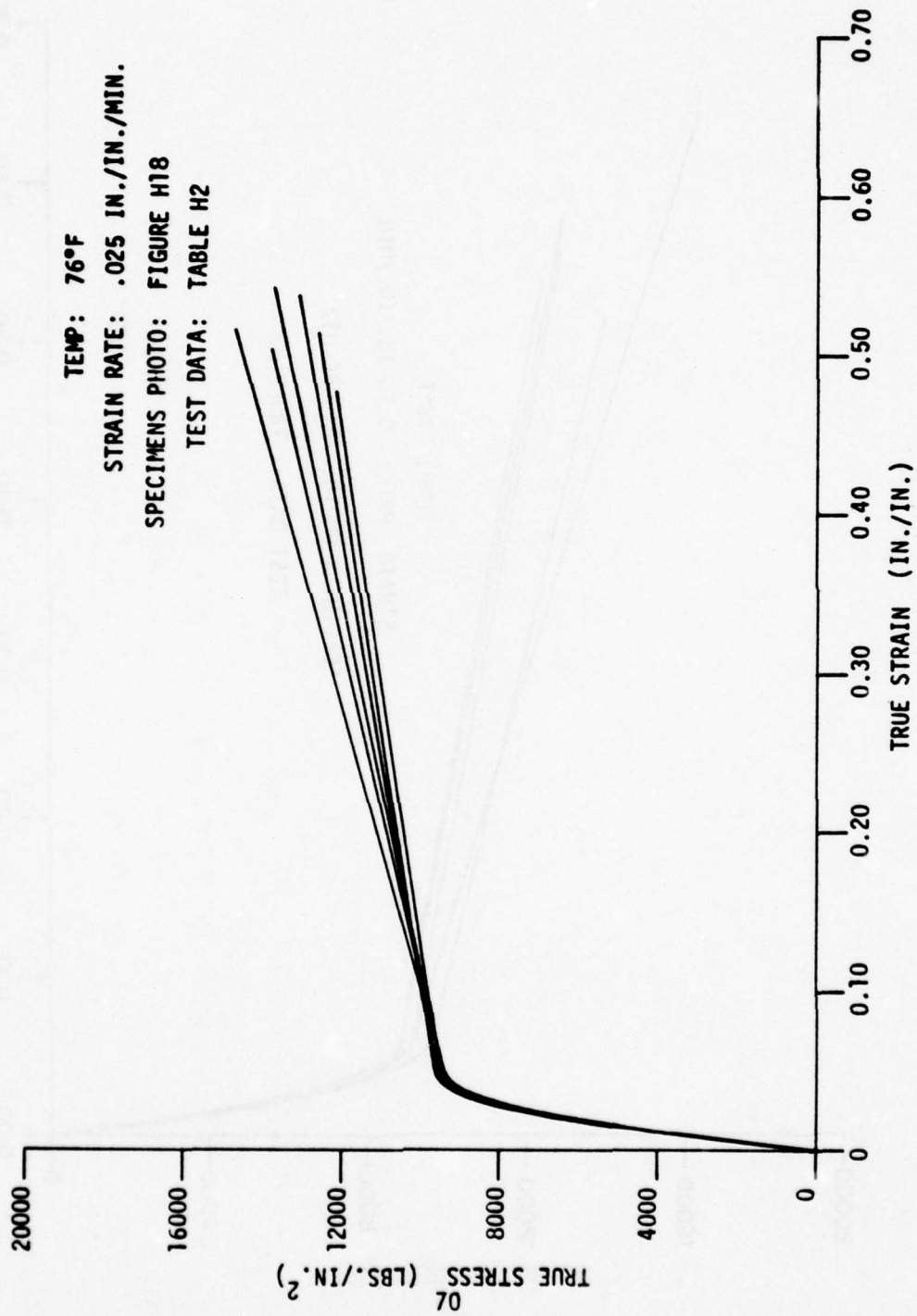


Figure H6 Tensile Test Curves (SMU 543-108 - 0.155 Polycarbonate).

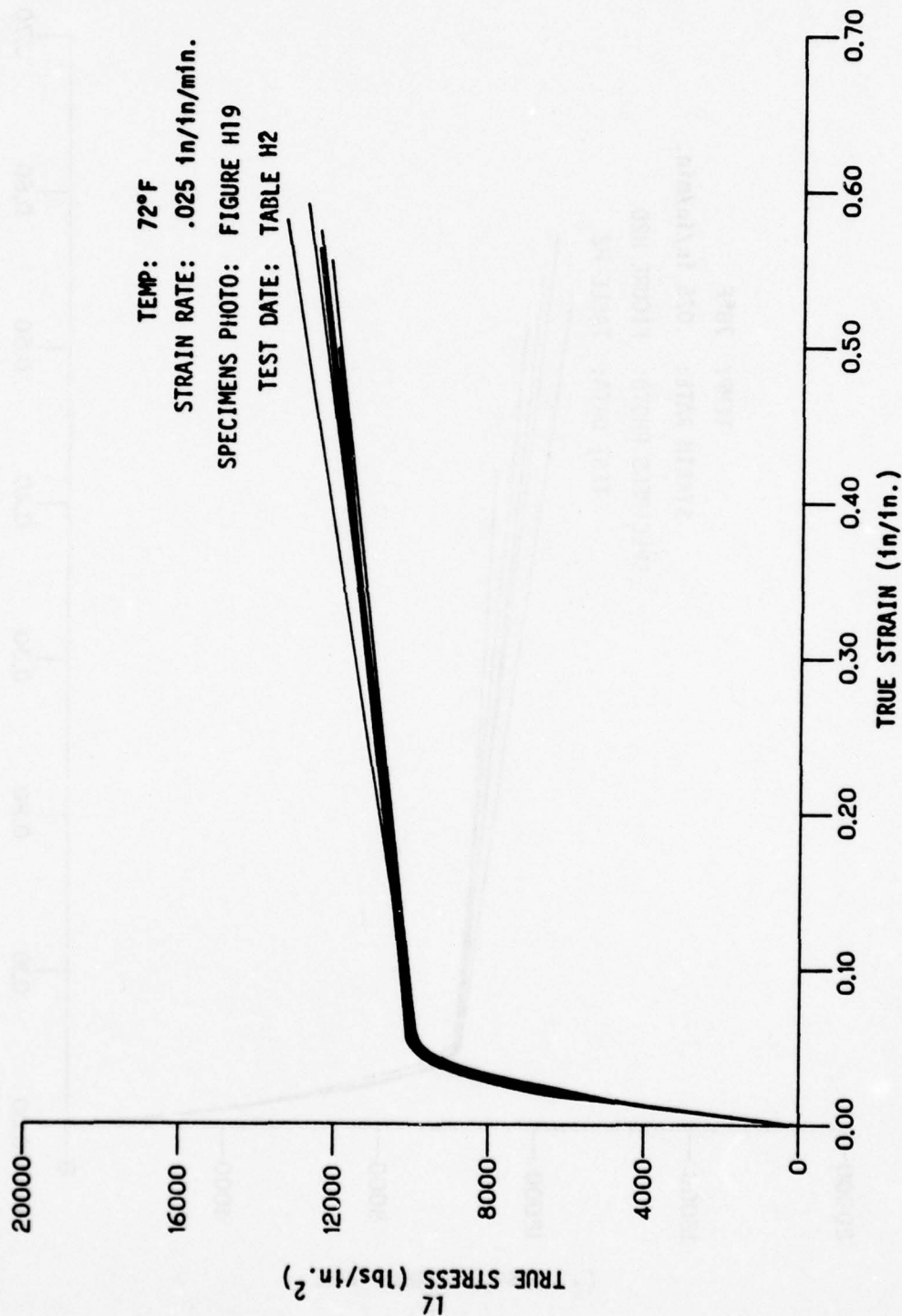


Figure H7. Tensile Test Curves (TEX605/0029 -0.50 Polycarbonate).

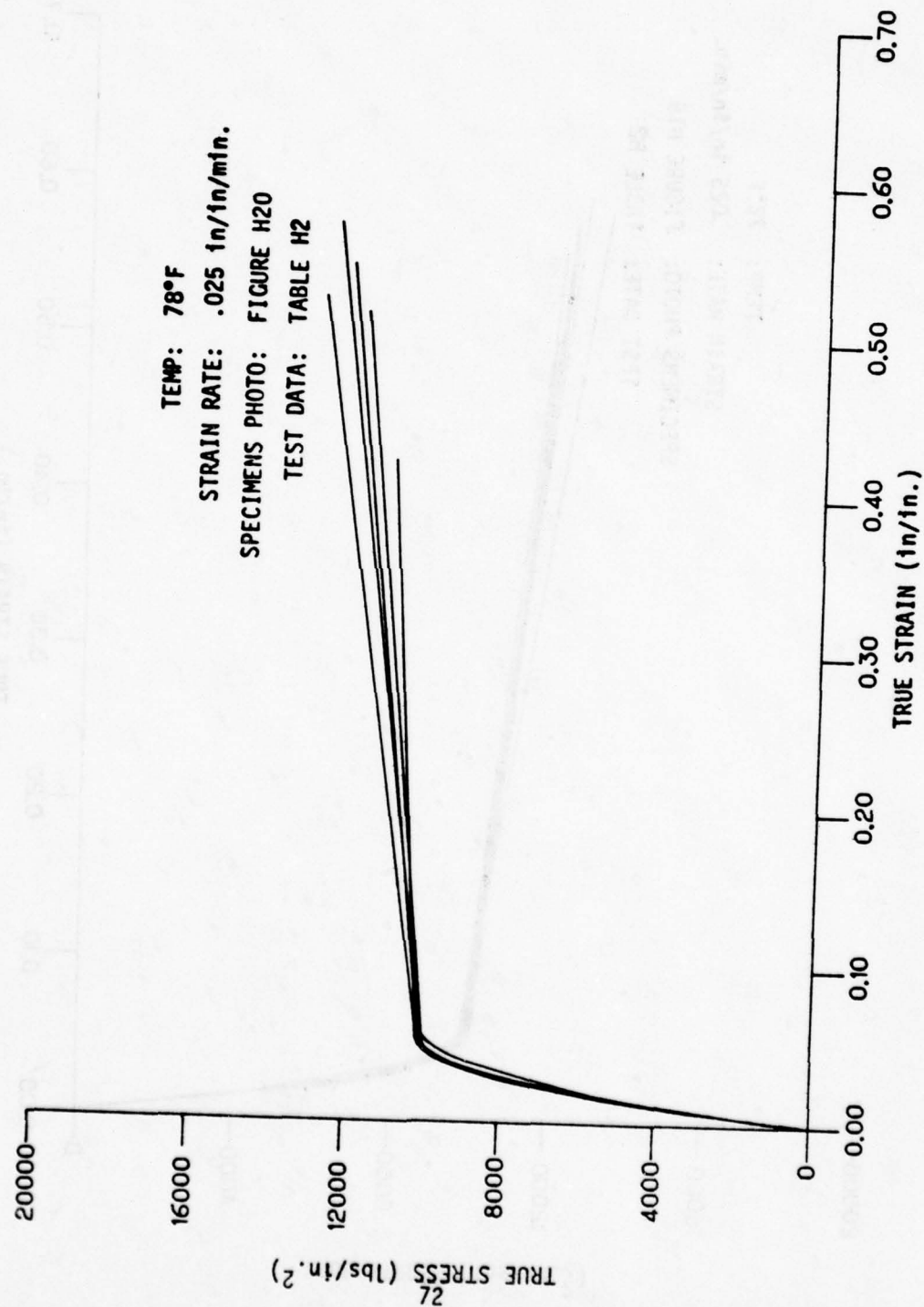


Figure H8. Tensile Test Curves (TEX605/0030 -0.50 Polycarbonate).

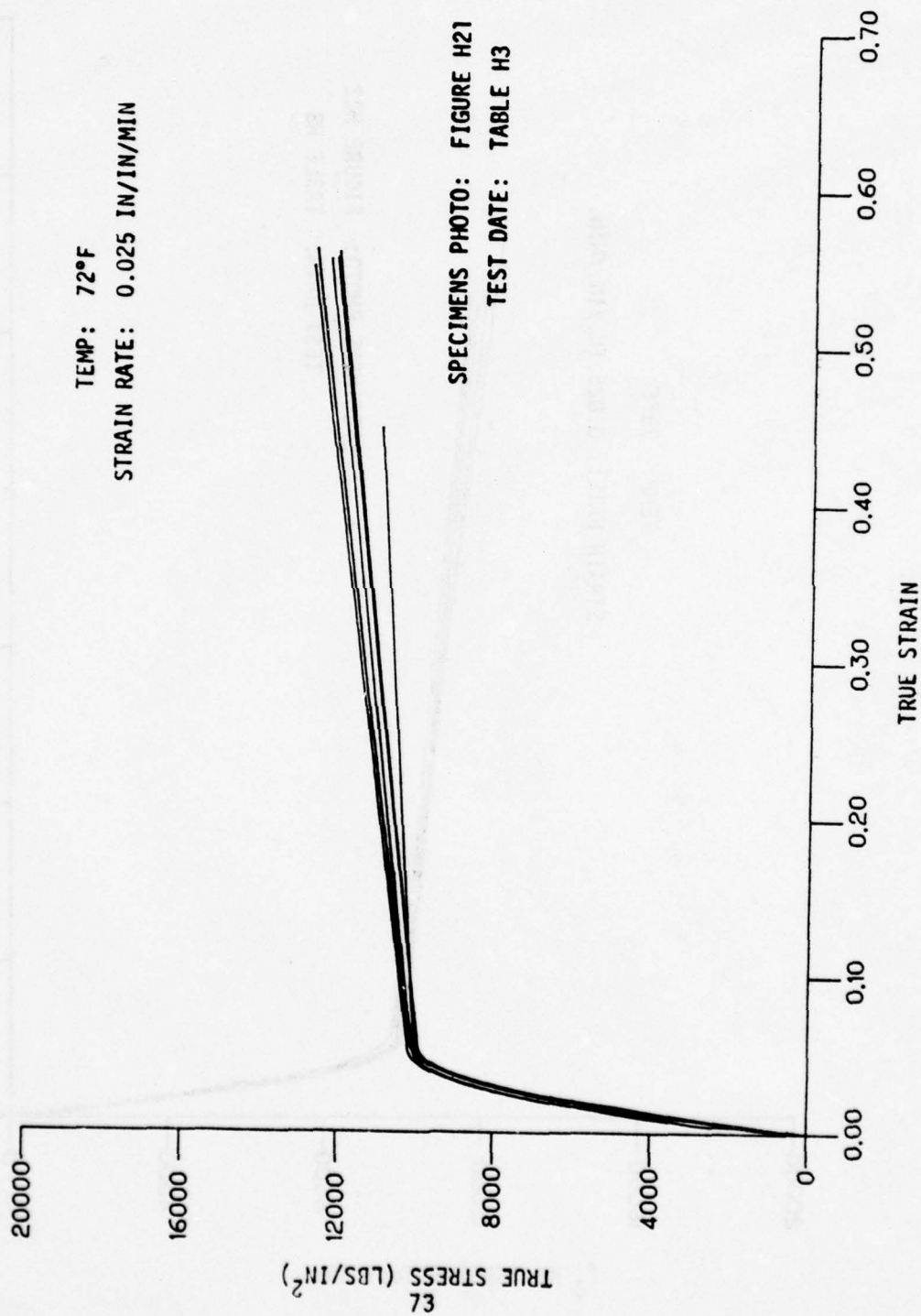


Figure H9 . Tensile Test Curves (TEX60540040 - 0.50 Polycarbonate).

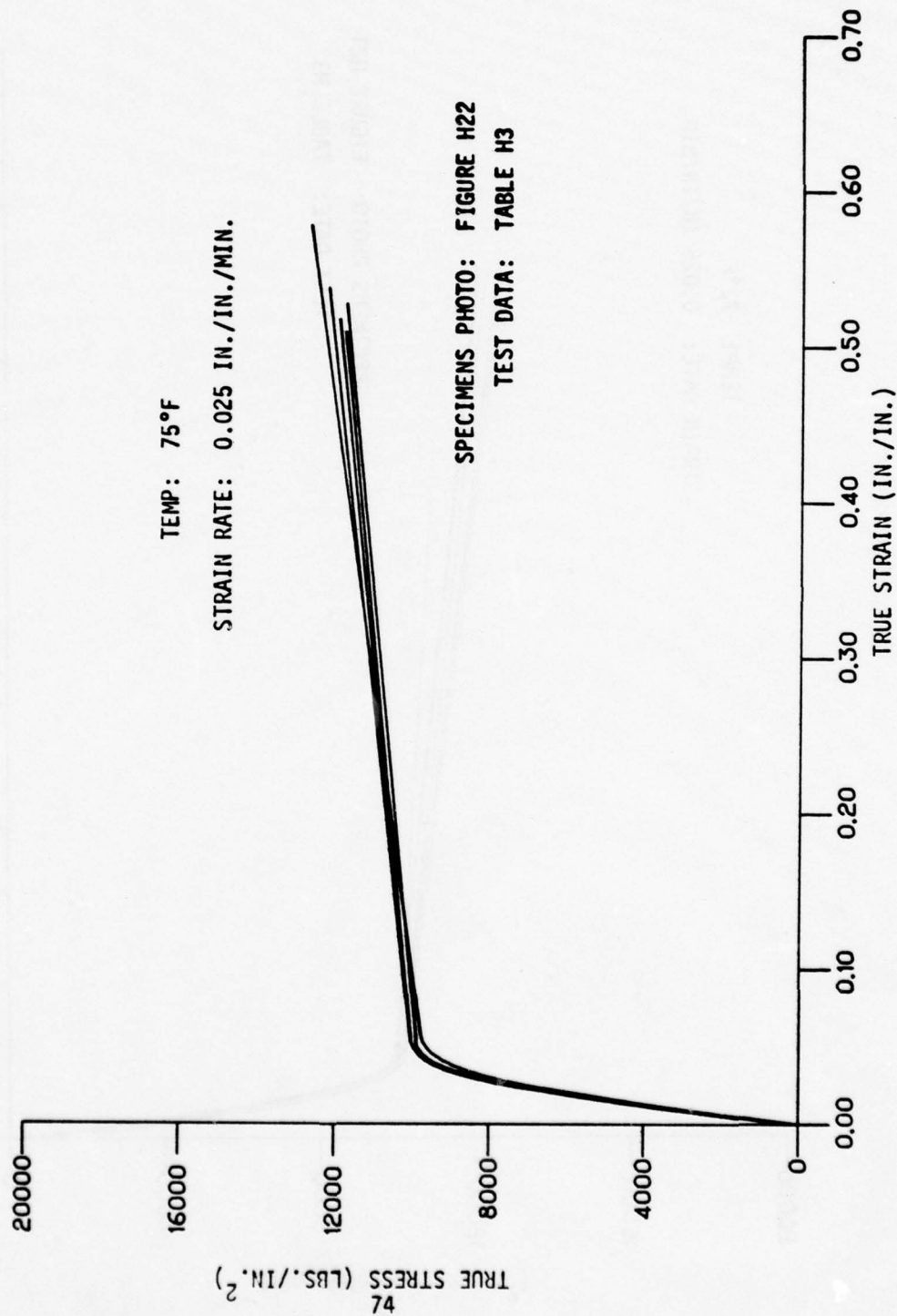
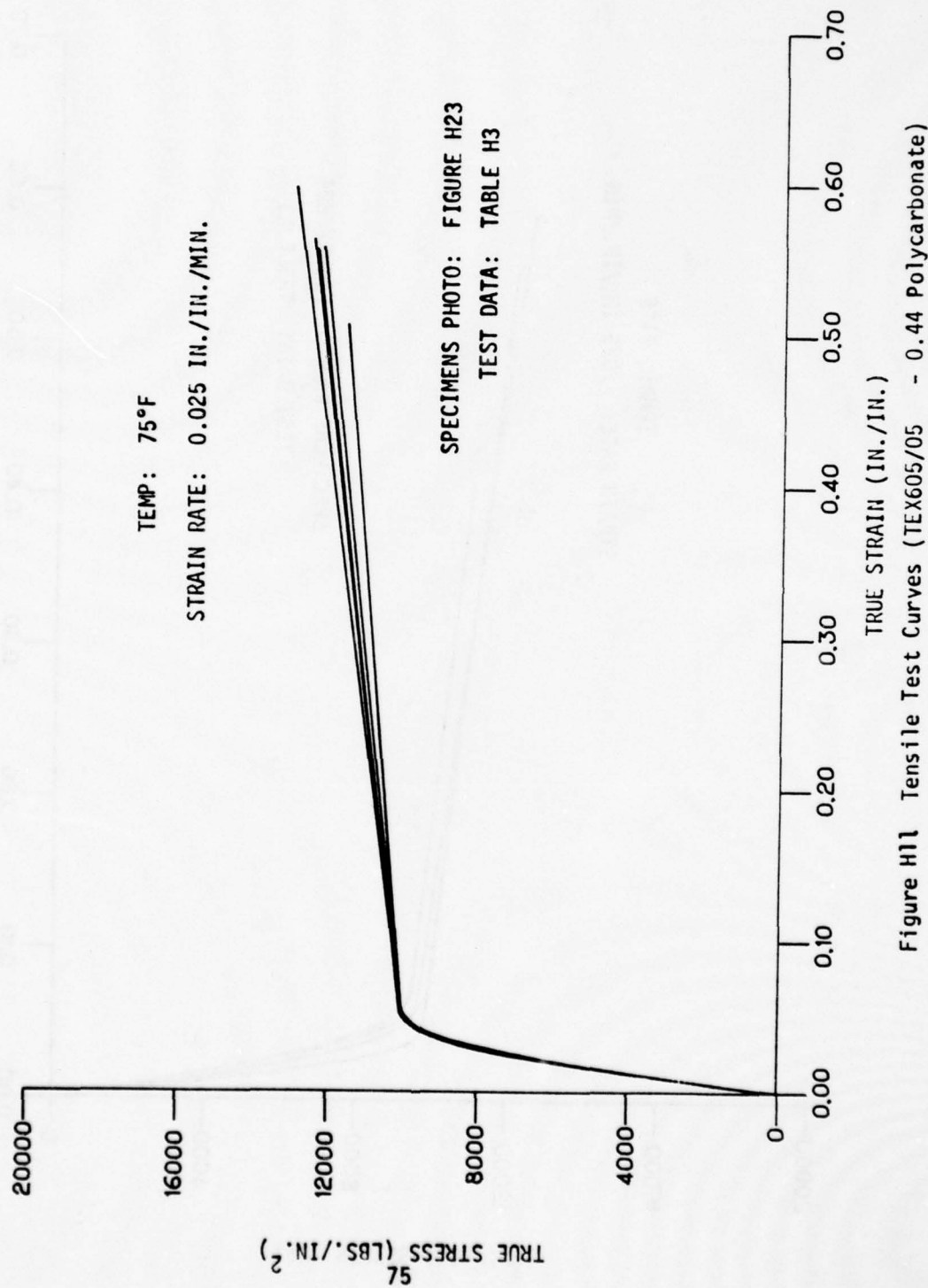


Figure H1Q Tensile Test Curves (TEX605/01 - 0.44 Polycarbonate)



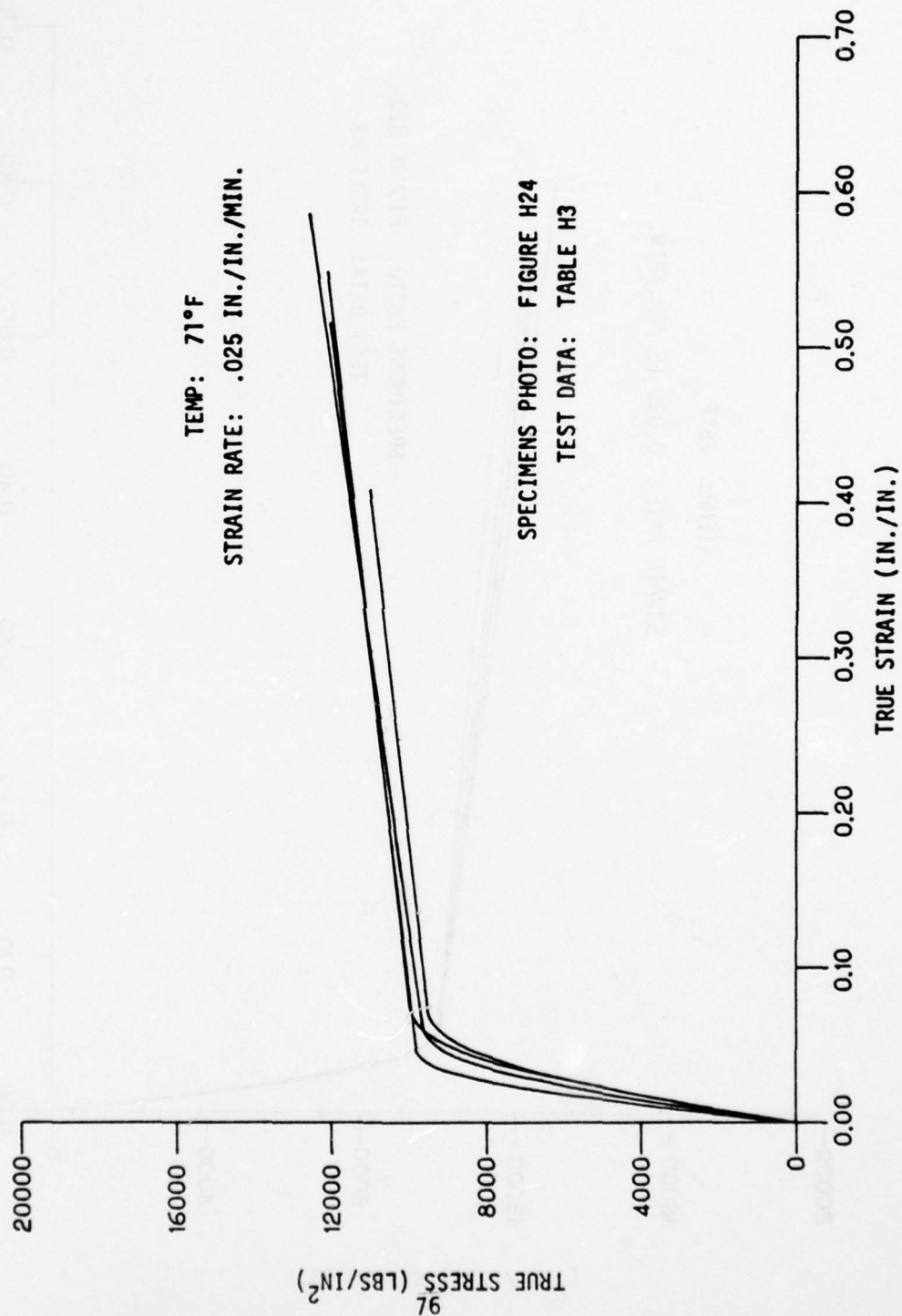


Figure H12 Tensile Test Curves (TEX 605C43 - 0.50 Polycarbonate).

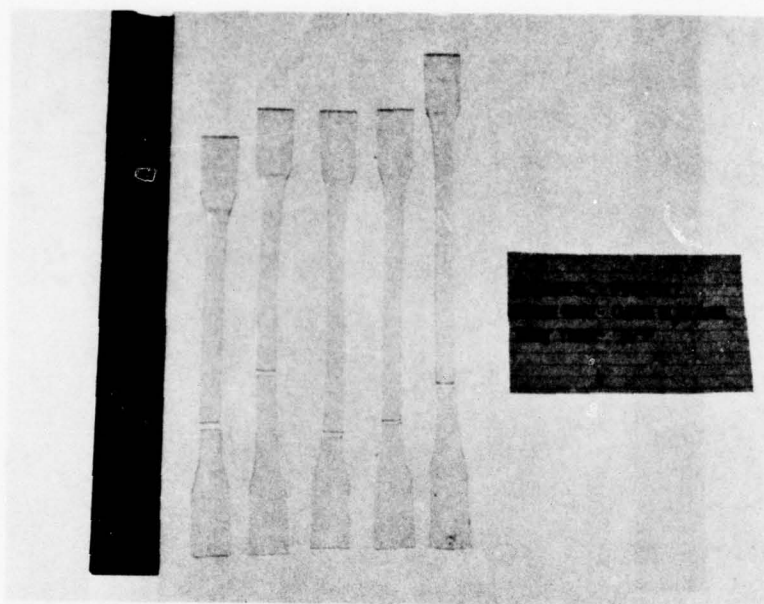


Figure H13.

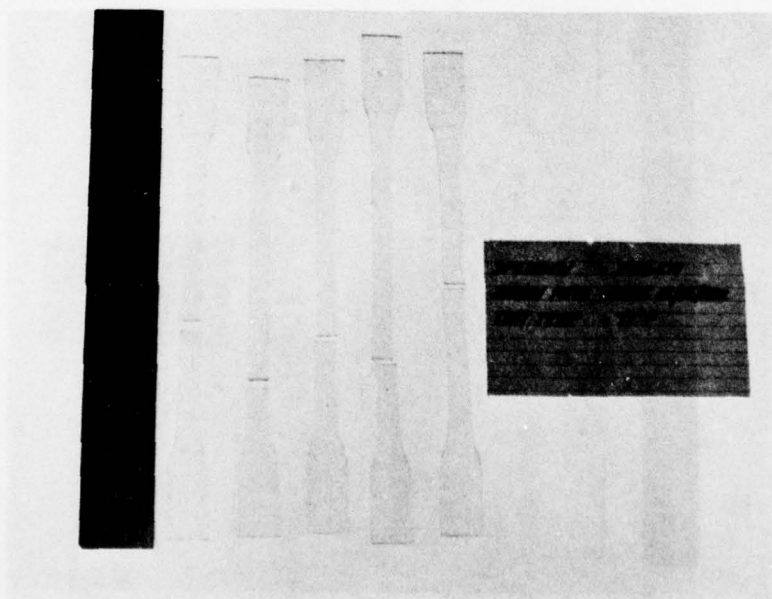


Figure H14.
77

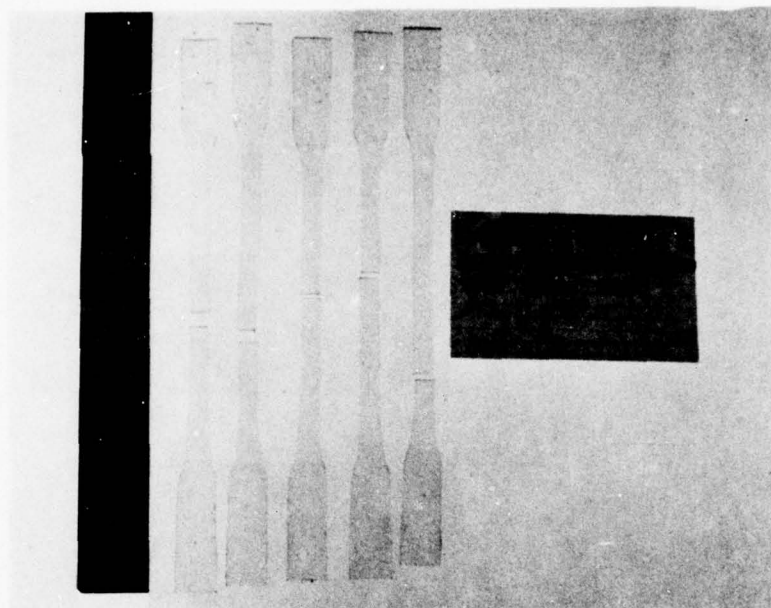


Figure H15.

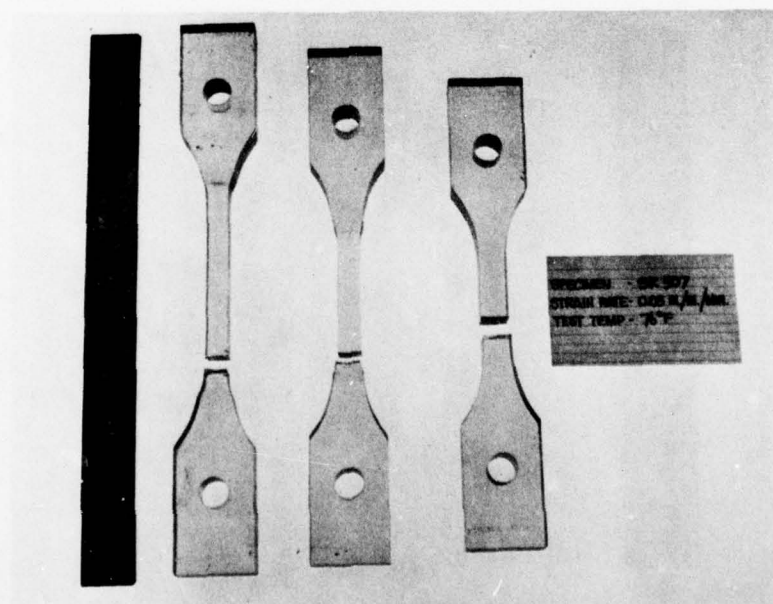


Figure H16.
78

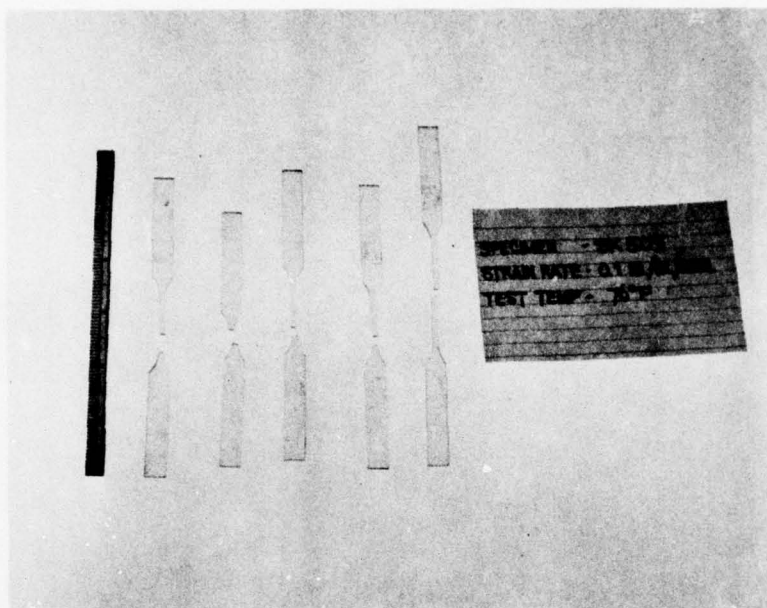


Figure H17.

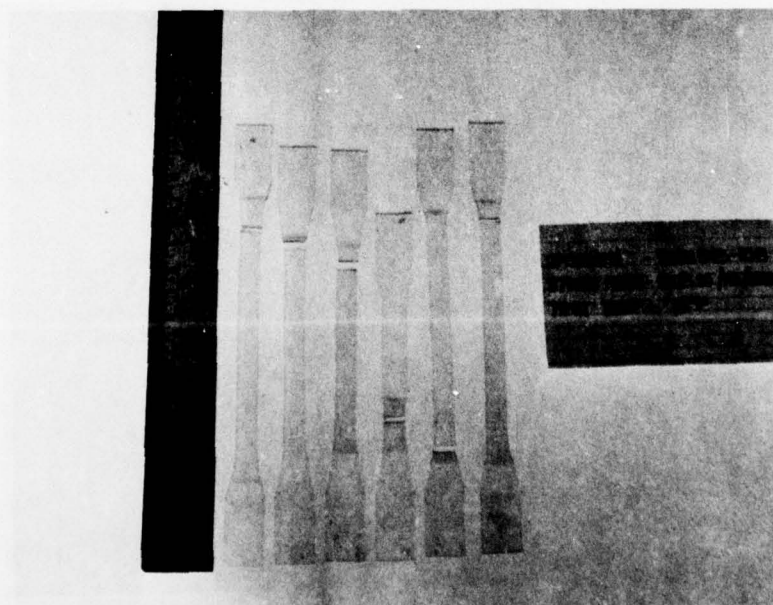


Figure H18.

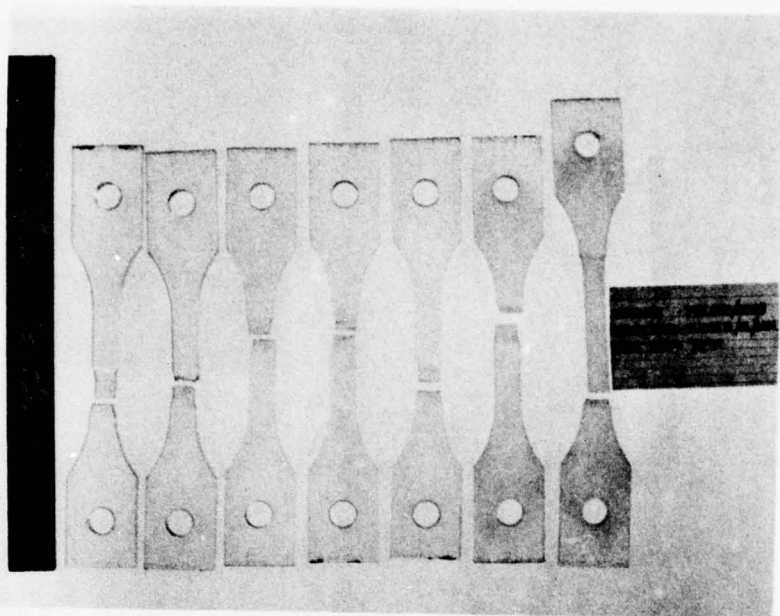


Figure H19.

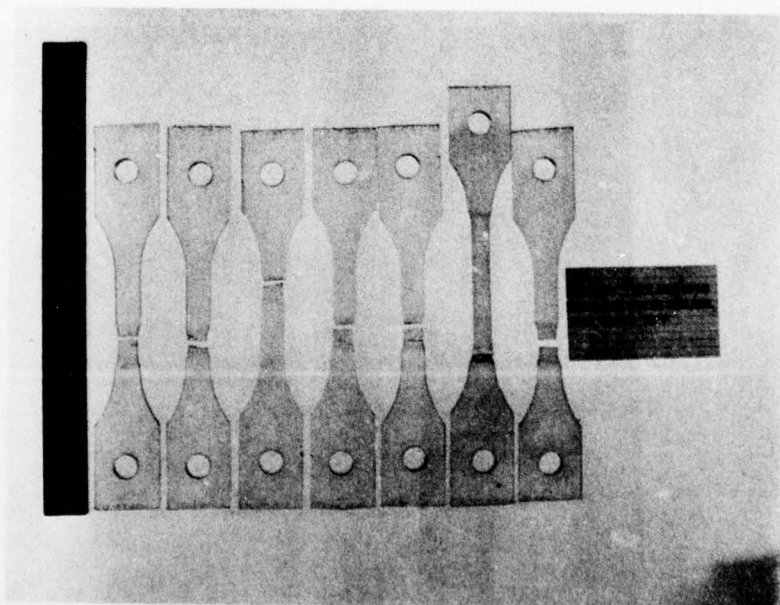


Figure H20.
80

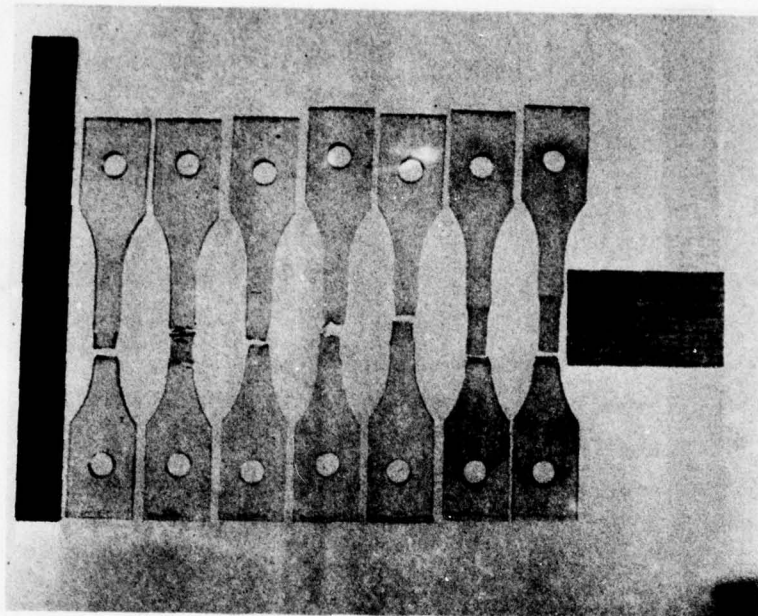


Figure H21.

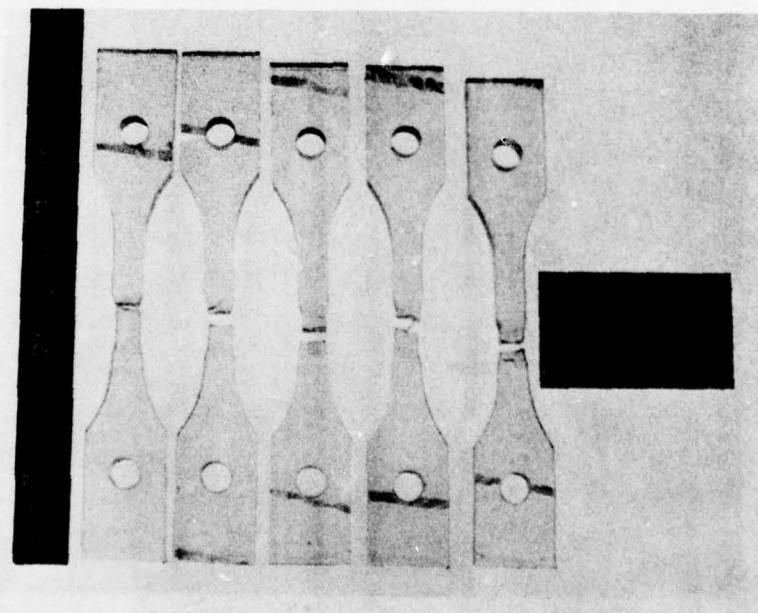


Figure H22.

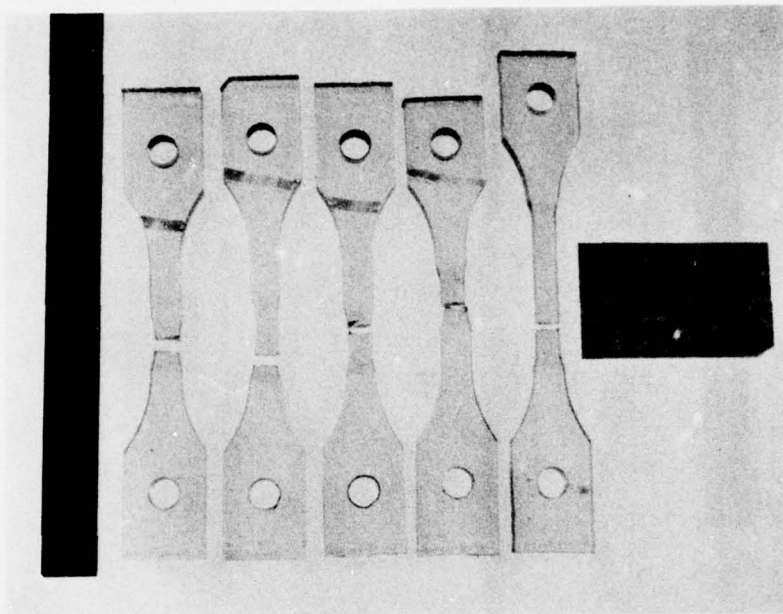


Figure H23.

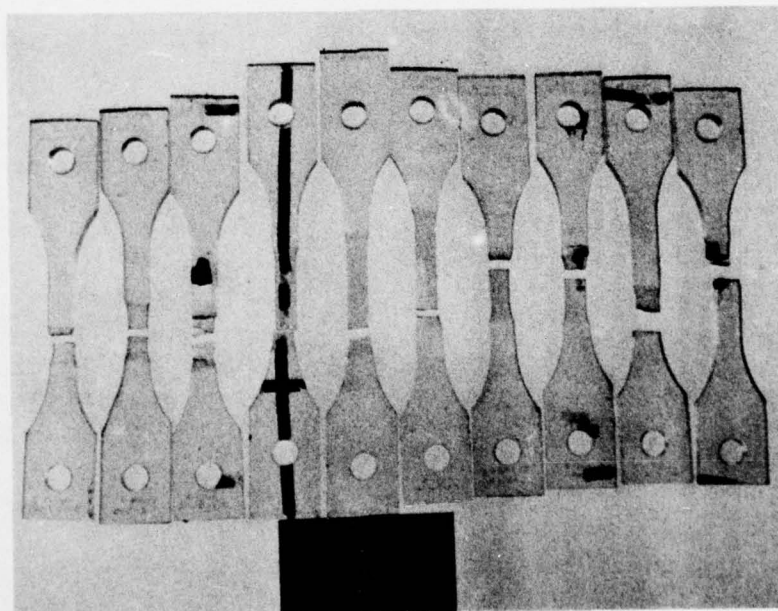


Figure H24.
82

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ex clst(stsstr) 'd4(ppg547bd) 1(tekstt)'
**** LOAD MODULE RELOCATION FACTOR = 0AF#EO *****
TEKSTT CHG 424 40 49-77 J.F. BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
3
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 00 MAX
(1=YES, 2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
01 1000 PPG 517
TEST SPECIMENS END POINT STRESS STRAIN
1 DAC503-1 17079 0.622
2 DAC503-2 17026 0.607
3 DAC503-3 17203 0.600
4 DAC503-4 17508 0.598
5 DAC503-5 16473 0.577
FRACTURE STPAIRS = 0.604 AVG STD DEV
FRACTURE STRESSES = 17237.939 537.999 14449.286 15404.876 16084.248
ORIGINAL CURVES TRUNCATED AT 0.058 STRAIN
BASE CURVE IS 5 OF CURVES USED
NOT NORMAL STRAIN STRESS DCPIT DCAC
0.0422 4076 0.3370 0.3382
0.0429 4280 0.3370 0.3554
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
YIELD STRESS = 0407.840 AVG STD DEV
SECANT TO YIELD STRESS = 859006.400 75.659 8763.484 8940.069 9035.173
154583. 154638. 156243.
PC NO. STRAIN SEC STRAIN A SEC STRAIN B SEC STRAIN C SEC
2 0.004 364827. 0.004 330345. 0.004 343444. 0.004 350037.
4 0.040 342614. 0.040 324333. 0.040 338764. 0.040 335766.
6 0.046 320187. 0.046 293772. 0.046 303295. 0.046 304502.
8 0.020 304733. 0.020 280088. 0.020 290408. 0.020 295504.
STRAIN AT 2ND PT ON BASE CURVE = 0.000
ELASTIC MODULUS AT 0.000 STRAIN STD DEV AVG
373907. 307434. 334279. 348806.
CHECK ON CALC MEAN MODULUS ON TEST CURVES = 370602.
AREA UNDER AVERAGE DESIGN CURVE = 7562.923

```

Figure H25. Computer Run PPG517

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ex clst(stsstr) 'a1(ppg517a1) 1(teksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 *****
TEREST,CHG 12A,10-19-77; J.F.LURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
K-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.1 1000
TEST SPECIMENS-    END POINT STRESS    STRAIN
1 PPG517-1          16814.    0.573
2 PPG517-2          17288.    0.605
3 PPG517-3          15453.    0.547
4 PPG517-4          18541.    0.593
5 PPG517-5          16408.    0.579

                AVG    STD DEV    A    B    C
FRACTURE STRAINS    =    0.580    0.022    0.454    0.305    0.533
FRACTURE STRESSES    = 16900.762  1138.663 10363.699 13021.338 14452.637
ORIGINAL CURVES TRUNCATED AT 0.05% STRAIN
LAST CURVE IS 1 OF CURVES USED.
NOT NORMAL    STRAIN    SSTRESS    DCRT    DCAC
0.0101    3452.    0.3370    0.3877
0.0109    3688.    0.3370    0.4191
0.0116    3917.    0.3370    0.4150
0.0124    4144.    0.3370    0.4066
0.0132    4386.    0.3370    0.4304
0.0141    4633.    0.3370    0.4443
NOT NORMAL    STRAIN    SSTRESS    DCRT    DCAC
0.0141    4633.    0.3370    0.4443
0.0144    4714.    0.3370    0.4179
0.0148    4794.    0.3370    0.3711
NOT NORMAL    STRAIN    SSTRESS    DCRT    DCAC
0.0492    8959.    0.3370    0.3581
0.0518    9009.    0.3370    0.3495
NOT NORMAL    STRAIN    SSTRESS    DCRT    DCAC
0.0518    9009.    0.3370    0.3495
0.0528    9026.    0.3370    0.3448
0.0538    9043.    0.3370    0.3486
0.0548    9060.    0.3370    0.3553
0.0559    9077.    0.3370    0.3635
0.0571    9094.    0.3370    0.3667
0.0582    9110.    0.3370    0.3673
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
                AVG    STD DEV    A    B    C
YIELD STRESS    = 9095.423    85.863    8692.481    8802.886    8910.816
SECANT TO YIELD STRESS =156270.756    147809.    151252.    153107.
                AVG    A    B    C
PC NO.    STRAIN    SLC    STRAIN    SLC    STRAIN    SLC    STRAIN    SLC
2    0.003    345158.    0.003    264816.    0.003    297479.    0.003    315070.
4    0.009    340918.    0.009    305033.    0.009    319622.    0.009    327479.
6    0.016    317600.    0.016    305955.    0.016    310639.    0.016    313239.
8    0.022    293066.    0.022    266547.    0.022    269198.    0.022    290625.
STRAIN AT 2ND PT ON BISEL CURVE= 0.000
                STRAIN    STD DEV    AVG    A    B    C
ELASTIC MODULUS AT 0.000    13703.    348336.    250420.    290227.    311666.
CHECK ON CIRC-LEAF MODULUS ON TEST CURVES= 345776.
MINI UNDER AVERAGE DESIGN CURVE= 7153.175

```

Figure H26. Computer Run PPG517

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ex dist(stsstr) '31(ppg5171) 1(tcstst)'
**** LOAD MODULE RELOCATION FACTOR = 0APPP8 *****
TESTST,CHG 123,12-14-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GROSS DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 PPG5170-1 12525. 0.529
2 PPG5170-2 13943. 0.492
3 PPG5170-3 13695. 0.586
4 PPG5170-4 15192. 0.577
5 PPG5170-5 15959. 0.563
AVG STD DEV A B
FRACTURE STRESS = 7.553 0.055 0.237 0.366
FRACTURE STRESSSES = 15777.700 2014.634 2102.108 2270.312 11300.730
ORIGINAL CURVES TRUNCATED AT 0.056 STRAIN
BASE CURVE IS 5 OF CURVES USED.
NOT NORMAL STRAIN STRESSSES DCRIT DCAC
0.0425 3939. 0.3377 0.3429
NOT NORMAL STRAIN STRESSSES DCRIT DCAC
0.0425 3939. 0.3377 0.3429
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AVG STD DEV A B
YIELD STRESS = 9232.455 44.621 9976.234 9277.131 9134.520
SECANT TO YIELD STRESS = 155157.392 150575. 152439. 153441.
AVG A B
PO NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.007 359826. 0.007 323148. 0.007 336135. 0.007 344225.
4 0.014 333071. 0.014 301552. 0.014 314425. 0.014 321075.
5 0.022 275039. 0.022 270531. 0.022 274451. 0.022 280714.
6 0.035 238565. 0.035 224243. 0.035 239344. 0.035 233155.
STRAIN AT END OF BASE CURVE= 0.003
STRAIN STD DEV AVG A B
CLASSIC MODULUS AT 0.003 3076. 333151. 322411. 333974. 347394.
DESIGN OR CALC-ORIG MODULUS ON TEST CURVES= 353392.
AREA UNDER AVERAGE DESIGN CURVE= 6560.792

```

Figure H27. Computer Run PPG517D

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TEST SPECIMENS-	END POINT STRESS	STRAIN			
1 SK-507-1	12013.	0.587			
2 SK-507-2	13217.	0.572			
4 SK-507-4	12416.	0.535			
5 SK-507-5	12690.	0.549			
	AVG	STD DEV	A	B	C
FRACTURE STRAINS	= 0.561	0.023	0.397	0.464	0.500
FRACTURE STRESSES	= 12584.205	505.397	9025.201	10480.743	11261.076
ORIGINAL CURVES TRUNCATED AT 0.062 STRAIN					
BASE CURVE IS 1 OF CURVES USED.					
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	
	0.0403	8893.	0.3810	0.3822	
	0.0416	8990.	0.3810	0.3855	
	0.0428	9083.	0.3810	0.3899	
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	
	0.0428	9083.	0.3810	0.3899	
	0.0440	9164.	0.3810	0.3953	
	0.0452	9240.	0.3810	0.4019	
	0.0464	9312.	0.3810	0.4093	
	0.0477	9377.	0.3810	0.4171	
	0.0490	9435.	0.3810	0.4244	
	0.0503	9481.	0.3810	0.4264	
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	
	0.0503	9481.	0.3810	0.4264	
	0.0522	9523.	0.3810	0.4187	
	0.0542	9558.	0.3810	0.4164	
	0.0562	9588.	0.3810	0.4190	
	0.0583	9609.	0.3810	0.4215	
	0.0604	9624.	0.3810	0.4227	
	0.0624	9638.	0.3810	0.4250	
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	
	0.0503	9481.	0.3810	0.4264	
	0.0512	9503.	0.3810	0.4219	
	0.0522	9523.	0.3810	0.4187	
	0.0532	9542.	0.3810	0.4169	
	0.0542	9558.	0.3810	0.4164	
	0.0552	9573.	0.3810	0.4171	
	0.0562	9588.	0.3810	0.4190	
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	
	0.0562	9588.	0.3810	0.4190	
	0.0573	9602.	0.3810	0.4219	
	0.0583	9609.	0.3810	0.4215	
	0.0593	9616.	0.3810	0.4219	
	0.0604	9624.	0.3810	0.4227	
	0.0614	9631.	0.3810	0.4238	
	0.0624	9638.	0.3810	0.4250	
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.					
	AVG	STD DEV	A	B	C
YIELD STRESS	= 9466.945	377.281	6810.133	7896.702	8479.223
SECANT TO YIELD STRESS	= 151614.294		109065.	126467.	135796.
	AVG	A	B	C	
PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN
2	0.003	328033.	0.003	63075.	0.003
4	0.009	325766.	0.009	224279.	0.009
6	0.017	303684.	0.017	229593.	0.017
8	0.025	274901.	0.025	209586.	0.025
STRAIN AT 2ND PT ON BASE CURVE= 0.000					
	STRAIN	STD DEV	AVG	A	B
		45347.	332192.	-81799.	87513.
ELASTIC MODULUS AT 0.000					
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 333623.					
AREA UNDER AVERAGE DESIGN CURVE= 5914.884					

Figure H28. Computer Run SK507


```

ex clst(stsstr) 'a1(sk50901) g(e77623.d0211.feg021) 1(tekst)'
**** LOAD MODULE RELOCATION FACTOR = 3AF1E0 ****
TEKST,CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPLCIMENS,10 MAX
(I=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GENDER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SK509-1 13019. 0.580
2 SK509-2 16436. 0.643
3 SK509-3S 12475. 0.538
4 SK509-4 12936. 0.556
5 SK509-5 14037. 0.513
AVG STD DEV A B C
FRACTURE STRAINS = 0.566 0.049 0.282 0.397 0.460
FRACTURE STRESSES = 13700.601 1500.196 4651.286 8362.804 10361.680
ORIGINAL CURVLS TRUNCATED AT 0.064 STRAIN
LAST CURVE IS 2 OF CURVLS USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AVG STD DEV A B C
YIELD STRESS = 9174.688 334.436 7254.403 8035.094 8455.543
SLOPE TO YIELD STRESS = 142674.565 112012. 124953. 131491.
AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.007 327728. 0.007 148796. 0.007 221541. 0.007 260718.
4 0.019 275619. 0.019 198626. 0.019 229928. 0.019 246785.
6 0.035 221350. 0.035 179444. 0.035 196450. 0.035 205056.
8 0.048 161927. 0.048 151855. 0.048 164081. 0.048 170665.
STRAIN AT 2ND PT ON BASE CURVE= 0.003
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.003 33112. 327216. 189211. 245317. 275533.
CHECK ON CALC-RELA MODULUS ON TEST CURVES= 326700.
AREA UNDER AVERAGE DESIGN CURVE= 6172.326

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Figure H29. Computer Run SK509

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** clst(stsstr) 'dl(sw854301) 1(teksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 *****
TEKSST,CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
  ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
  (1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS-  END POINT STRESS  STRAIN
1 SW8543-1        13696.  0.542
2 SW8543-2        13755.  0.503
3 SW8543-3        12140.  0.477
4 SW8543-4        12578.  0.514
5 SW8543-5        13068.  0.537
6 SW8543-6        14676.  0.515
      AVG STD DEV      A      B      C
FRACTURE STRAINS = 0.515 0.024 0.395 0.443 0.470
FRACTURE STRESSES = 13316.950 913.855 6693.016 10571.903 11567.195
ORIGINAL CURVES TRUNCATED AT 0.054 STRAIN
BASE CURVE IS 5 OF CURVES USED.
NOT NORMAL STRAIN STRESS OCRIT DCAC
0.0141 4707. 0.3190 0.3518
NOT NORMAL STRAIN STRESS OCRIT DCAC
0.0218 6557. 0.3190 0.3267
0.0245 7157. 0.3190 0.3296
NOT NORMAL STRAIN STRESS OCRIT DCAC
0.0245 7157. 0.3190 0.3296
0.0251 7263. 0.3190 0.3362
0.0256 7374. 0.3190 0.3348
0.0262 7466. 0.3190 0.3244
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
      AVG STD DEV      A      B      C
YIELD STRESS = 9528.102 95.052 9046.949 9242.376 9347.979
SECANT TO YIELD STRESS =177135.066 166190. 171623. 173766.
      AVG      A      B      C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.003 363037. 0.003 272726. 0.003 309403. 0.003 329229.
4 0.010 345131. 0.010 308922. 0.010 323649. 0.010 331607.
6 0.014 334253. 0.014 313136. 0.014 321725. 0.014 326366.
8 0.018 316235. 0.018 267123. 0.018 267071. 0.018 297650.
STRAIN AT 2ND PT ON BASE CURVE= 0.000
      STRAIN STD DEV      AVG      A      B      C
ELASTIC MODULUS AT 0.000 36670. 375818. 220494. 263581. 317671.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 366434.
AREA UNDER AVERAGE DESIGN CURVE= 5621.454

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Figure H30. Computer Run SWU543/108

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ex clst(stsstr) 'd1(tex60529) 1(teksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF180 *****
TEKSST,CHG 12A,10-10-77; J.F.BUPKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)
?
2
A-SCALE Y-SCALE TO CORRECT GIBBS DIGITISED DATA
?
01 1000
TEST SPECIMENS-   END POINT STRESS   STRAIN
1   TEX60529-1   12753.   0.541
2   TEX60529-2   12151.   0.555
3   TEX60529-3   12337.   0.551
4   TEX60529-4   12425.   0.574
5   TEX60529-5   11954.   0.498
6   TEX60529-6   12454.   0.562
7   TEX60529-7   13295.   0.580
                                AVG   STD DEV   A   B   C
FRACTURE STAINS      =   0.550   0.030   0.419   0.476   0.506
FRACTURE STRESSES    = 12481.866   437.481  10451.012  11276.539  11724.062
ORIGINAL CURVES TRUNCATED AT 0.069 STRAIN
BASE CURVE IS 2 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
                                AVG   STD DEV   A   B   C
YIELD STRESS          = 10019.751   91.241   9505.212   9767.383   9860.722
SECANT TO YIELD STRESS = 144501.006   138303.   140876.   142223.
                                AVG   A   B   C
PC NO.   STRAIN   SEC   STRAIN   SEC   STRAIN   SEC   STRAIN   SEC
2   0.007  338493.   0.007  270905.   0.007  298380.   0.007  313275.
4   0.014  317761.   0.014  281770.   0.014  296401.   0.014  304332.
6   0.023  291133.   0.023  293121.   0.023  238802.   0.023  258204.
8   0.030  265492.   0.030  214088.   0.030  235518.   0.030  246648.
STRAIN AT 2ND PT ON BASE CURVE= 0.003
                                STRAIN   STD DEV   AVG   A   B   C
ELASTIC MODULUS AT 0.003   16605.   339255.   284319.   306651.   318757.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 338874.
AREA UNDER AVERAGE DESIGN CURVE= 6017.123

```

Figure H31. Computer Run TEX605/0029

AD-A064 797

DOUGLAS AIRCRAFT CO LONG BEACH CALIF
TESTING FOR MECHANICAL PROPERTIES OF MONOLITHIC AND LAMINATED P--ETC(U)
OCT 78 F E GREENE

F/G 11/9

F33615-75-C-3105

UNCLASSIFIED

MDC-J6950

AFFDL-TR-77-96-PT-2

NL

2 OF 5
ADA
064 797



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TEST SPECIMENS-	END POINT	STRESS	STRAIN
1 TFX60530-1		12532.	0.574
2 TFX60530-2		12162.	0.547
3 TFX60530-4		10078.	0.423
4 TFX60530-5		11761.	0.517
5 TFX60530-7		12851.	0.526

	AVG	STD DEV	A	B	C
FRACURE STRAINS	= 0.517	0.057	0.180	0.322	0.304
FRACURE STRESSES	= 12056.620	727.004	7877.725	9576.652	10401.627

ORIGINAL CURVES TRUNCATED AT 0.043 STRAIN
BASE CURVE IS 1 OF CURVES USED.

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0076	2617.	0.3370	0.3508
	0.0084	2470.	0.3370	0.3705
	0.0092	3122.	0.3370	0.3791
	0.0100	3373.	0.3370	0.3791
	0.0108	3620.	0.3370	0.3744
	0.0116	3862.	0.3370	0.3700

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0116	3862.	0.3370	0.3700
	0.0121	4002.	0.3370	0.3686
	0.0126	4144.	0.3370	0.3465
	0.0136	4731.	0.3370	0.3425

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0136	4731.	0.3370	0.3425
	0.0322	4433.	0.3370	0.3653
	0.0362	4072.	0.3370	0.3766

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0362	4072.	0.3370	0.3766
	0.0367	4035.	0.3370	0.3760
	0.0373	4007.	0.3370	0.3760
	0.0378	4157.	0.3370	0.3766
	0.0384	4215.	0.3370	0.3762
	0.0390	4273.	0.3370	0.3757
	0.0396	4331.	0.3370	0.3753

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0396	4331.	0.3370	0.3753
	0.0407	4431.	0.3370	0.3748
	0.0418	4528.	0.3370	0.3744
	0.0431	4621.	0.3370	0.3742
	0.0444	4708.	0.3370	0.3742
	0.0457	4783.	0.3370	0.3750
	0.0471	4844.	0.3370	0.3393

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0471	4844.	0.3370	0.3393

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

	AVG	STD DEV	A	B	C
YIELD STRESS	= 10099.164	73.270	9667.467	9834.501	9930.613
SECANT TO YIELD STRESS	= 159004.944		152378.	155074.	156526.

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.007	344540.	0.007	290612.	0.007	312536.	0.007	324344.
4	0.015	324022.	0.015	266745.	0.015	290031.	0.015	302572.
6	0.040	234738.	0.040	200341.	0.040	214325.	0.040	221857.
8	0.053	187742.	0.053	177511.	0.053	181670.	0.053	183011.

STRAIN AT 2ND PT ON BASE CURVE= 0.004

	STRAIN	STD DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.004		8205.	345403.	290261.	318020.	329123.

CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 342746.
HARDING-MAX SLOPE(E)= 348354. AT STRAIN= 0.007
AREA UNDER AVERAGE DESIGN CURVE= 5480.510

Figure H32. Computer Run TEX605/0030

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TEST SPECIMENS-	END POINT	STRESS	STRAIN
1 TEX60540-1		10971.	0.440
2 TEX60540-3		12130.	0.560
3 TEX60540-3		12172.	0.557
4 TEX60540-5		12332.	0.556
5 TEX60540-6		12496.	0.562
6 TEX60540-7		12758.	0.551

STRAIN AT FRACTURE POINT IS NOT NORMAL

	AVG	STD DEV	A	P	C
FRACTURE STRAINS	= 0.539	0.044	0.315	0.406	0.455
FRACTURE STRESSES	= 12176.567	646.469	8004.141	10233.281	10951.508

ORIGINAL CURVES TRUNCATED AT 0.050 STRAIN
BASE CURVE IS 5 OF CURVES USED.

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0023	880.	0.3100	0.3213
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0023	880.	0.3100	0.3213
	0.0025	950.	0.3100	0.3278
	0.0027	1021.	0.3100	0.3284
	0.0029	1093.	0.3100	0.3235
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0043	1583.	0.3100	0.3344
	0.0045	1637.	0.3100	0.3438
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0045	1637.	0.3100	0.3438
	0.0060	2160.	0.3100	0.3402
	0.0075	2640.	0.3100	0.3445
	0.0090	3153.	0.3100	0.3450
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0330	8543.	0.3100	0.3248
	0.0339	8705.	0.3100	0.3359
	0.0349	8826.	0.3100	0.3478
	0.0359	8948.	0.3100	0.3501
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0359	8948.	0.3100	0.3501
	0.0369	9067.	0.3100	0.3621
	0.0380	9185.	0.3100	0.3603
	0.0391	9299.	0.3100	0.3596
	0.0403	9407.	0.3100	0.3571
	0.0416	9510.	0.3100	0.3497
	0.0420	9607.	0.3100	0.3350
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0420	9607.	0.3100	0.3350

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

	AVG	STD DEV	A	P	C
YIELD STRESS	= 10067.251	110.807	9506.346	9734.165	9857.272
SECANT TO YIELD STRESS	= 170706.606		161106.	165050.	167146.

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.002	375020.	0.002	116000.	0.002	221788.	0.002	278400.
4	0.004	376080.	0.004	3226.	0.004	158660.	0.004	236505.
6	0.017	320017.	0.017	103112.	0.017	248656.	0.017	272500.
8	0.025	298075.	0.025	228771.	0.025	255660.	0.025	270101.

STRAIN AT 2ND PT ON BASE CURVE = 0.001

	STRAIN	STD DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.001	36063.	368012.	105036.	265202.	303257.	

CHECK ON CALC-MEAN MODULUS ON TEST CURVES = 368043.
SLOPE-MAX SLOPE(F) = 423731. AT STRAIN = 0.004
AREA UNDER AVERAGE DESIGN CURVE = 5757.035

Figure H33. Computer Run TEX605/0040

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READY
ON CLIST(SMSTR) 'd1(tx100501) q(a77623.d0211.f07003) l(tcksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 *****
TCKST,CHG 12A,10-10-77; J.F.9UPKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 TEX605/01TC1 12670. 0.577
2 TEX605/01TC2 11751. 0.527
3 TEX605/01TC3 11774. 0.509
4 TEX605/01TC4 12206. 0.537
5 TEX605/01TC5 11928. 0.517
          AVG STD DEV
FRACTURE STRESS = 0.533 0.027 0.381 0.443 0.476
FRACTURE STRESS = 12065.800 383.389 9864.763 10759.593 11241.513
ORIGINAL CURVES TRUNCATED AT 0.057 STRAIN
BASE CURVE IS 4 OF CURVES USED.
NOT NORMAL STRAIN STRESS DCRIT DCAC
C.0058 2073. 0.3370 0.3416
C.0066 2337. 0.3370 0.3660
C.0074 2601. 0.3370 0.3863
C.0082 2864. 0.3370 0.4019
C.0090 3126. 0.3370 0.4089
NOT NORMAL STRAIN STRESS DCRIT DCAC
G.0090 3126. 0.3370 0.4089
G.0098 3366. 0.3370 0.4103
G.0105 3607. 0.3370 0.4092
C.0114 3849. 0.3370 0.4072
C.0122 4093. 0.3370 0.4052
G.0131 4332. 0.3370 0.3907
G.0139 4571. 0.3370 0.3703
NOT NORMAL STRAIN STRESS DCRIT DCAC
G.0139 4571. 0.3370 0.3703
G.0149 4824. 0.3370 0.3433
G.0197 6094. 0.3370 0.3871
NOT NORMAL STRAIN STRESS DCRIT DCAC
G.0197 6094. 0.3370 0.3871
G.0204 6247. 0.3370 0.3547
NOT NORMAL STRAIN STRESS DCRIT DCAC
G.0383 9313. 0.3370 0.3492
G.0404 9488. 0.3370 0.3747
NOT NORMAL STRAIN STRESS DCRIT DCAC
G.0404 9488. 0.3370 0.3747
G.0415 9557. 0.3370 0.3584
G.0427 9620. 0.3370 0.3421
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
          AVG STD DEV
YIELD STRESS = 9947.559 125.079 9229.483 9521.416 9678.640
SECANT TO YIELD STRESS = 174899.022 162274. 167407. 170171.
          AVG
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 C.009 342303. 0.009 236576. C.009 279306. C.009 303028.
4 C.020 306341. 0.020 244359. C.020 272135. C.020 284940.
6 C.030 274870. 0.030 234513. C.030 252107. C.030 260506.
8 C.040 206389. 0.040 188398. 0.040 195712. 0.040 193651.
STRAIN AT 2ND PT ON BASE CURVE= 0.004
          STRAIN STD DEV AVG
ELASTIC MODULUS AT 0.004 19627. 344229. 250929. 298860. 309289.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 344371.
MEAN UNDER AVERAGE DESIGN CURVE= 5637.752

```

Figure H34. Computer Run TEX605/01.

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```

ex clst(stsstr) 'd1(tx560501) g(e77623.d0211.feg004) 1(teksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 ****
TEKSST,CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 TEX605/05TC1 11603. 0.507
2 TEX605/05TC2 12513. 0.563
3 TEX605/05TC3 12425. 0.557
4 TEX605/05TC4 12250. 0.558
5 TEX605/05TC5 12995. 0.597
AVG STD DEV A B C
FRACTURE STRAINS = 0.557 0.032 0.372 0.447 0.487
FRACTURE STRESSES = 12357.200 503.976 9463.872 10640.152 11273.651
ORIGINAL CURVES TRUNCATED AT 0.057 STRAIN
BASE CURVE IS 3 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AVG STD DEV A B C
YIELD STRESS = 10055.376 24.611 9914.083 9971.525 10002.462
SECANT TO YIELD STRESS =176165.952 173691. 174697. 175239.
AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.009 331237. 0.009 299475. 0.009 312388. 0.009 319342.
4 0.020 301732. 0.020 280976. 0.020 289415. 0.020 293959.
6 0.037 245949. 0.037 236625. 0.037 240416. 0.037 242457.
8 0.057 176166. 0.057 173691. 0.057 174697. 0.057 175239.
STRAIN AT 2ND PT ON BASE CURVE= 0.005
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.005 7665. 332333. 320878. 325535. 328043.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 332252.
AREA UNDER AVERAGE DESIGN CURVE= 5990.562

```

Figure H35. Computer Run TEX605/05.

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```

ex clst(stsstr) 'd1(tex605c4) 1(teksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AE1EO *****
TEKSST,CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01112
?
1000
TEST SPECIMENS-   END POINT STRESS   STRAIN
1  TEX605C43-7      12555.      0.585
2  TEX605C43-8      12019.      0.515
3  TEX605C43-9      12093.      0.548
4  TEX605C43-10     11004.      0.408
                                AVG   STD DEV
FRACTURE STRAINS           =   0.514   0.077
FRACTURE STRESSES          = 11917.650  653.516
ORIGINAL CURVES TRUNCATED AT 0.075 STRAIN
BASE CURVE IS 3 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
                                AVG   STD DEV
YIELD STRESS               = 9795.639  215.823
SECANT TO YIELD STRESS      = 129997.596
                                A       B       C
109828.  118077.  122499.
                                AVG   STD DEV
PC NO.  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC
2  0.012 276014.  0.012 -99219.  0.012 54241.  0.012 136514.
4  0.019 261722.  0.019 -82972.  0.019 57999.  0.019 133576.
6  0.025 247236.  0.025 -49199.  0.025 72036.  0.025 137031.
8  0.040 211179.  0.040 60254.  0.040 121979.  0.040 155070.
STRAIN AT 2ND PT ON BASE CURVE= 0.006
                                STRAIN  STD DEV
ELASTIC MODULUS AT 0.006  52161.  273525.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 273865.
AREA UNDER AVERAGE DESIGN CURVE= 5290.094
                                A       B       C
-98715.  53522.  135138.

```

Figure H36. Computer Run TEX605C43

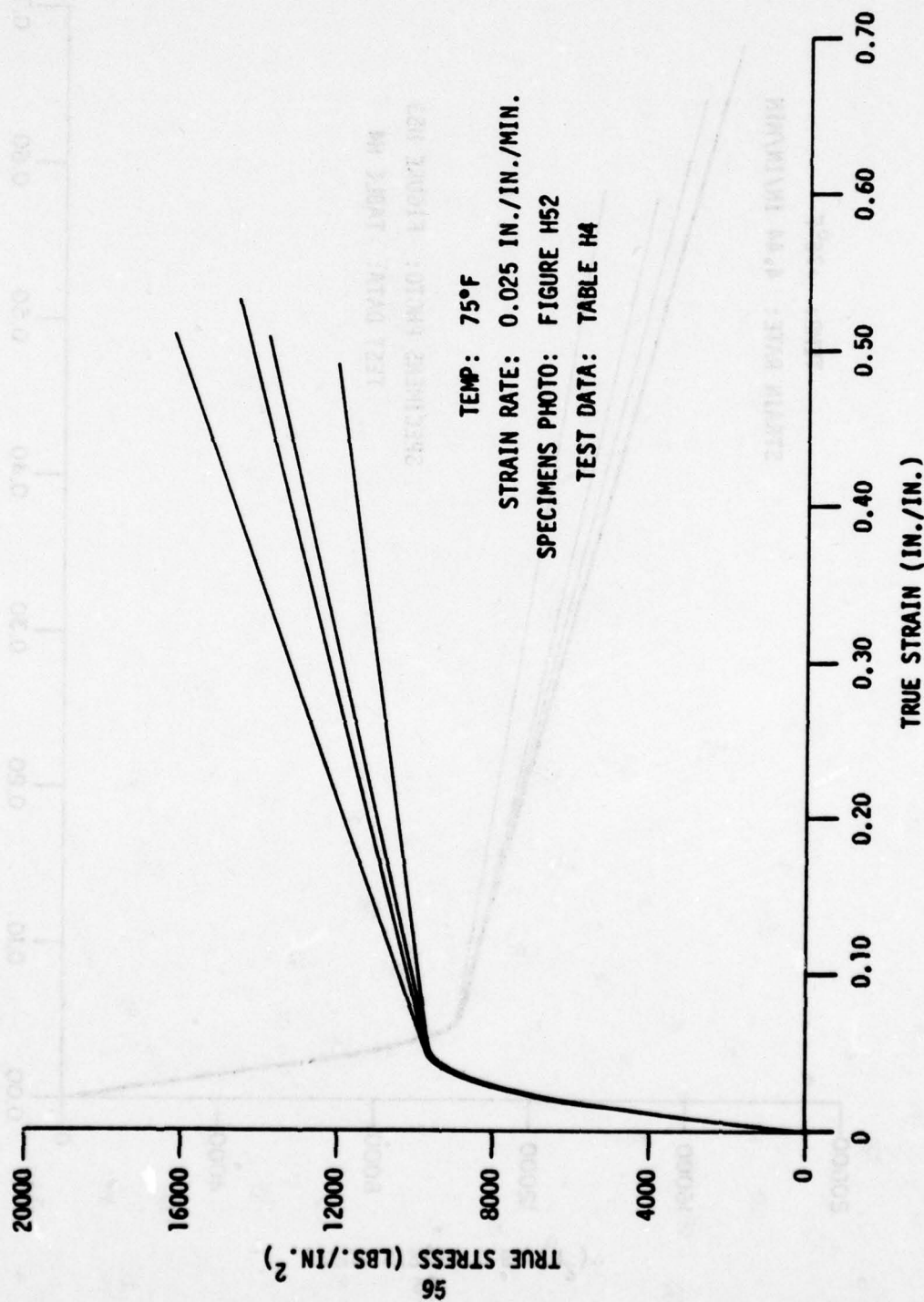


Figure H37 Tensile Test Curves (PPG 503 - 0.250 Polycarbonate).

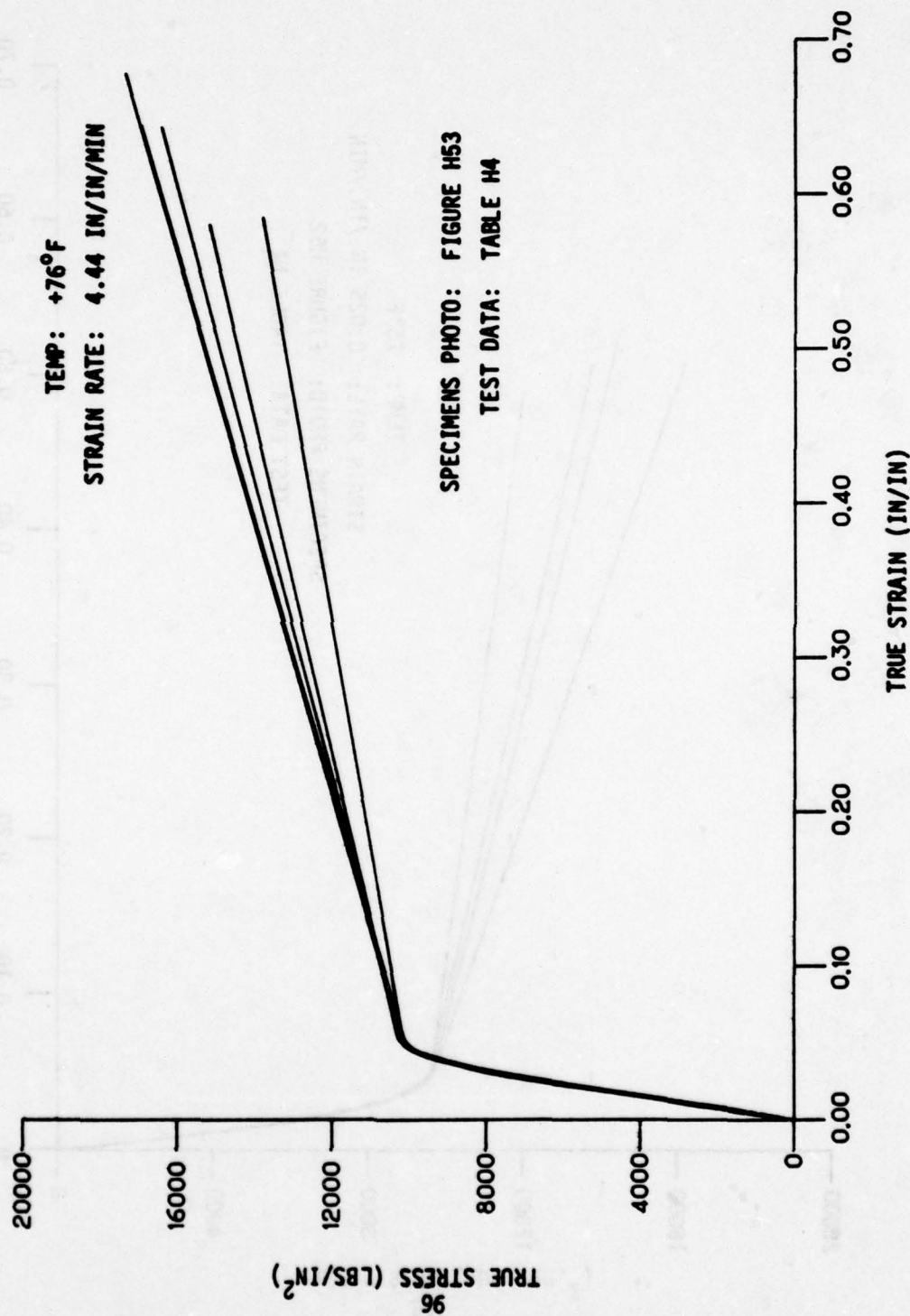


Figure H38 Tensile Test Curves (PP6503 - 0.25 Polycarbonate)

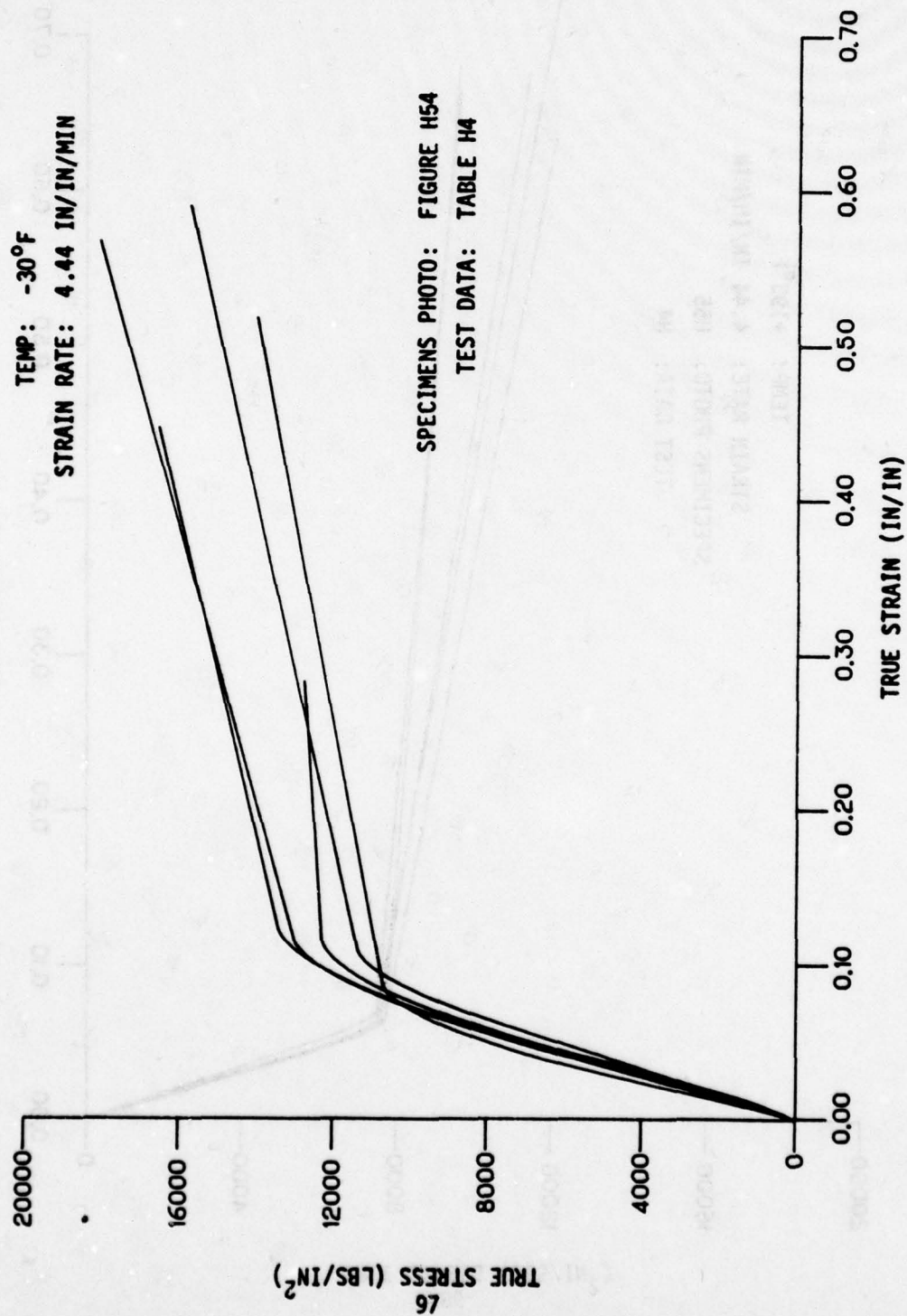


Figure H39 Tensile Test Curves (PP6503 - 0.25 Polycarbonate)

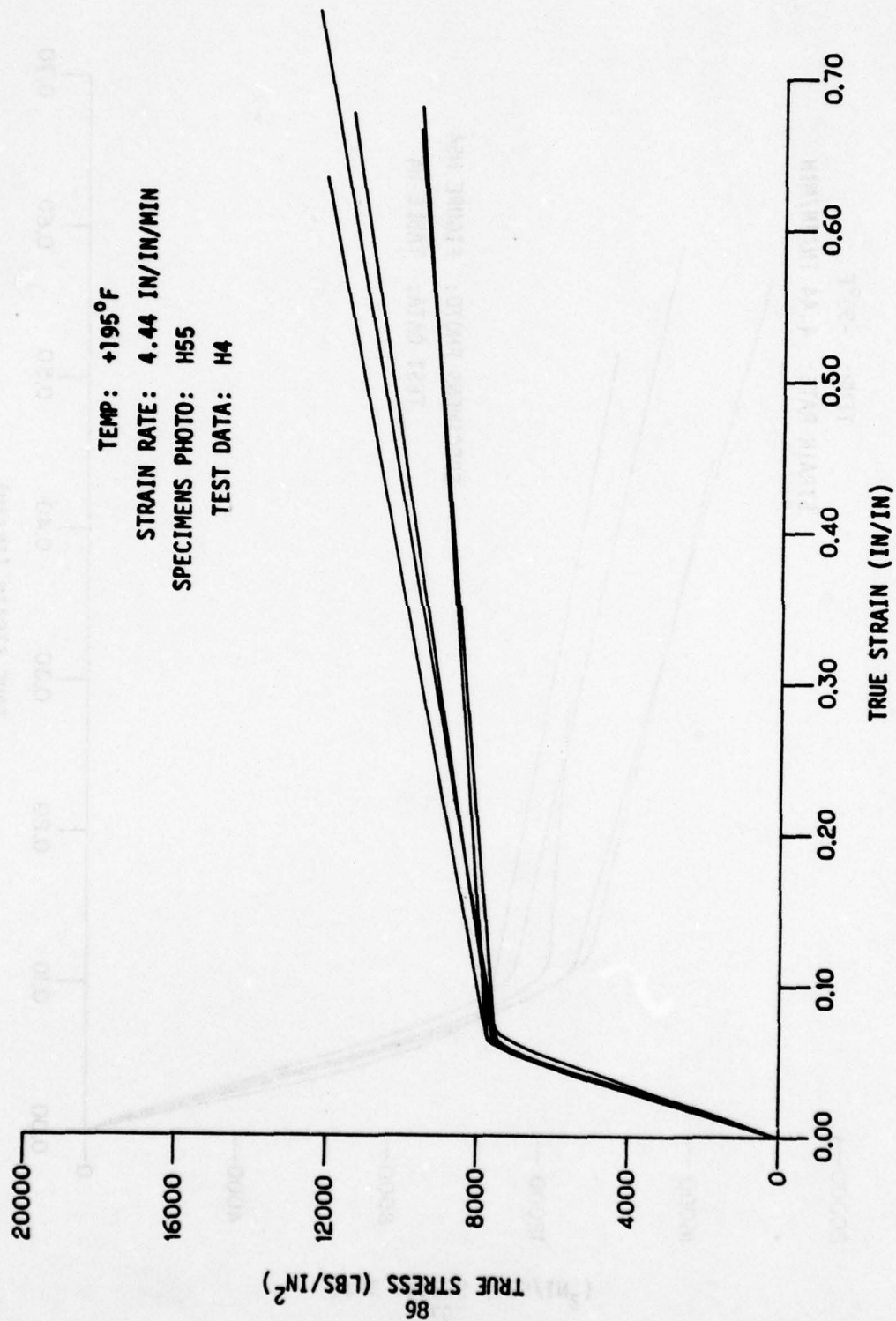


Figure H40 Tensile Test Curves (PPG503 - 0.25 Polycarbonate)

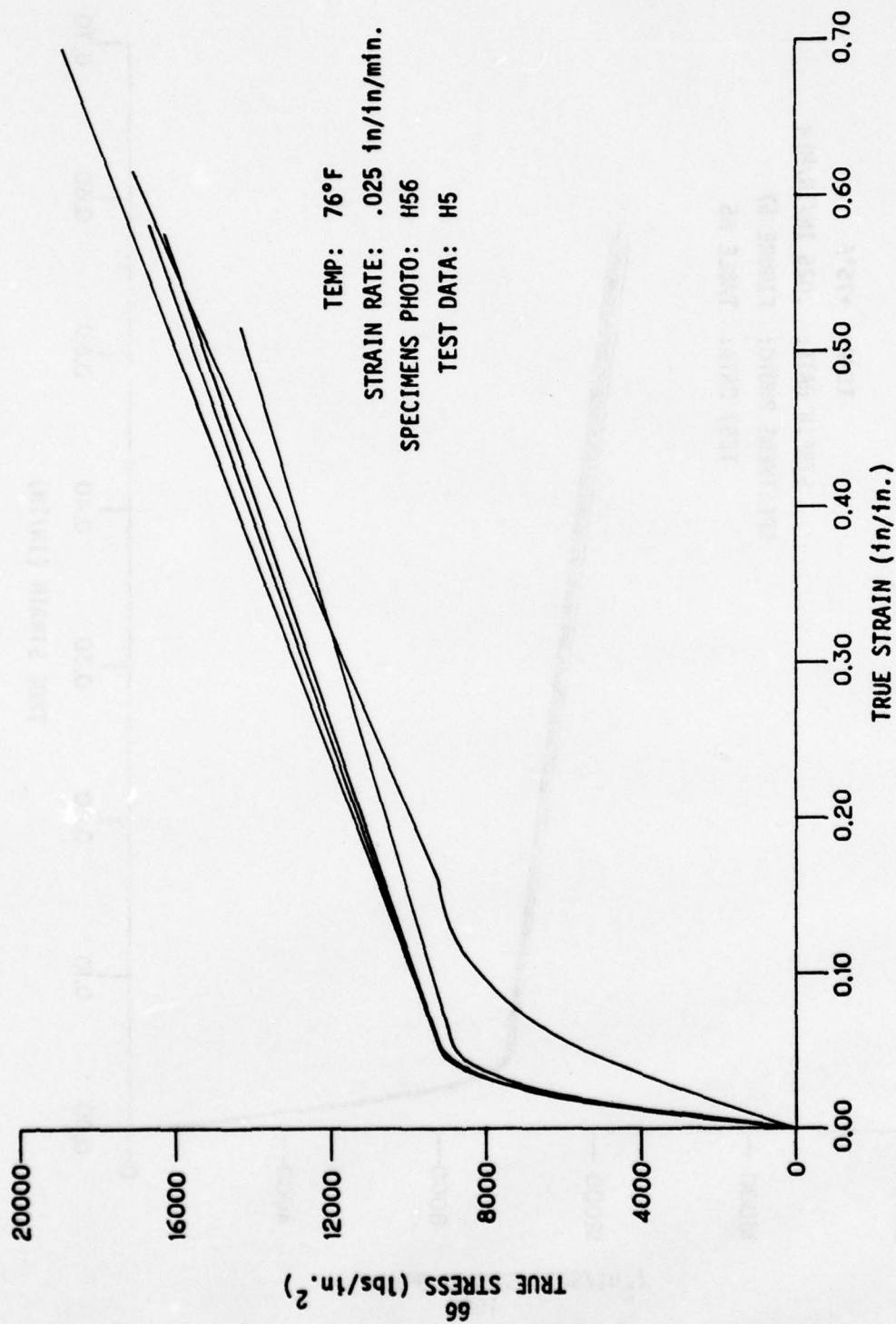


Figure H41 Tensile Test Curves (PPG 517-0.188 Polycarbonate).

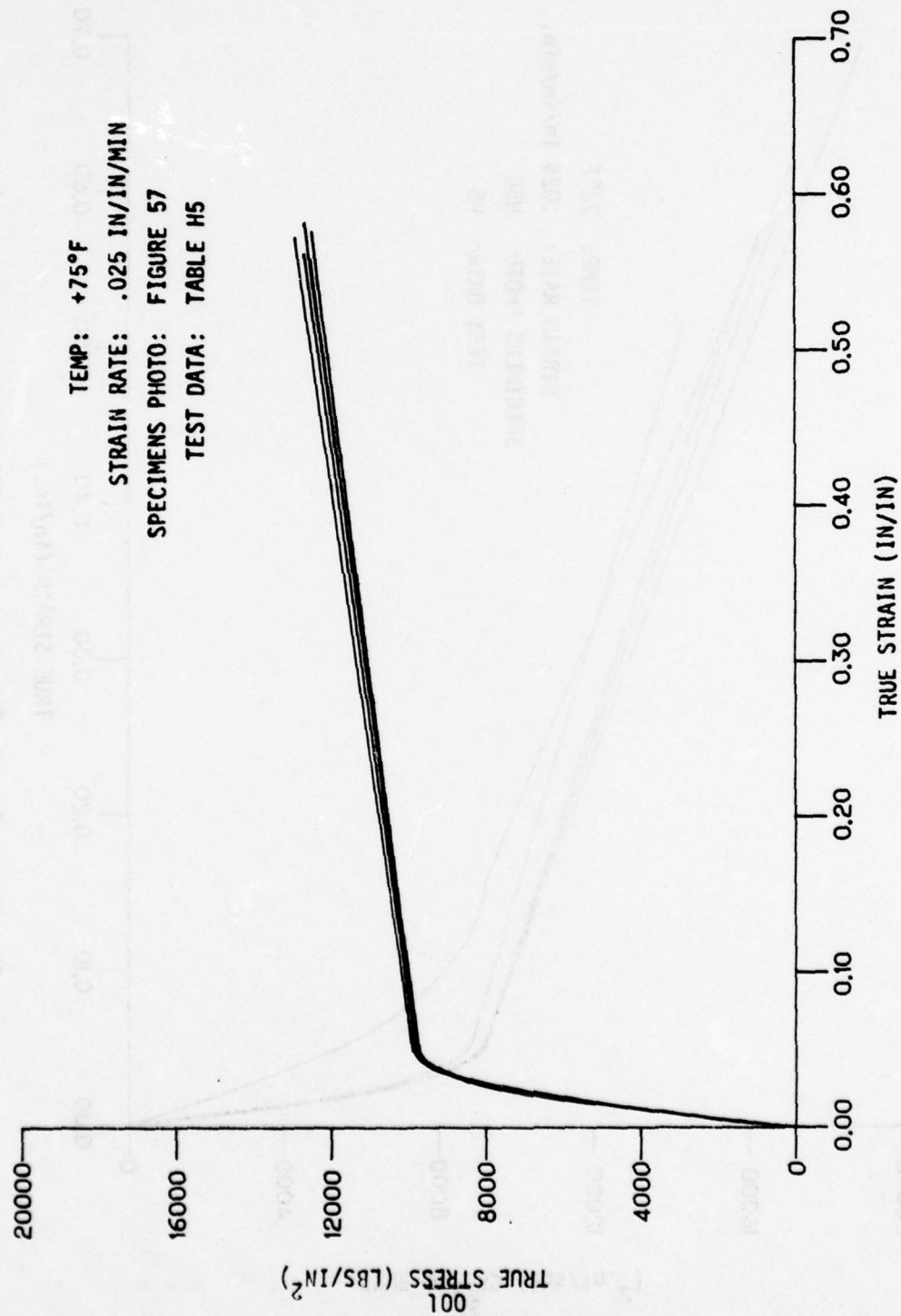


Figure H42. Tensile Test Curves (SK503 - 0.25 Polycarbonate)

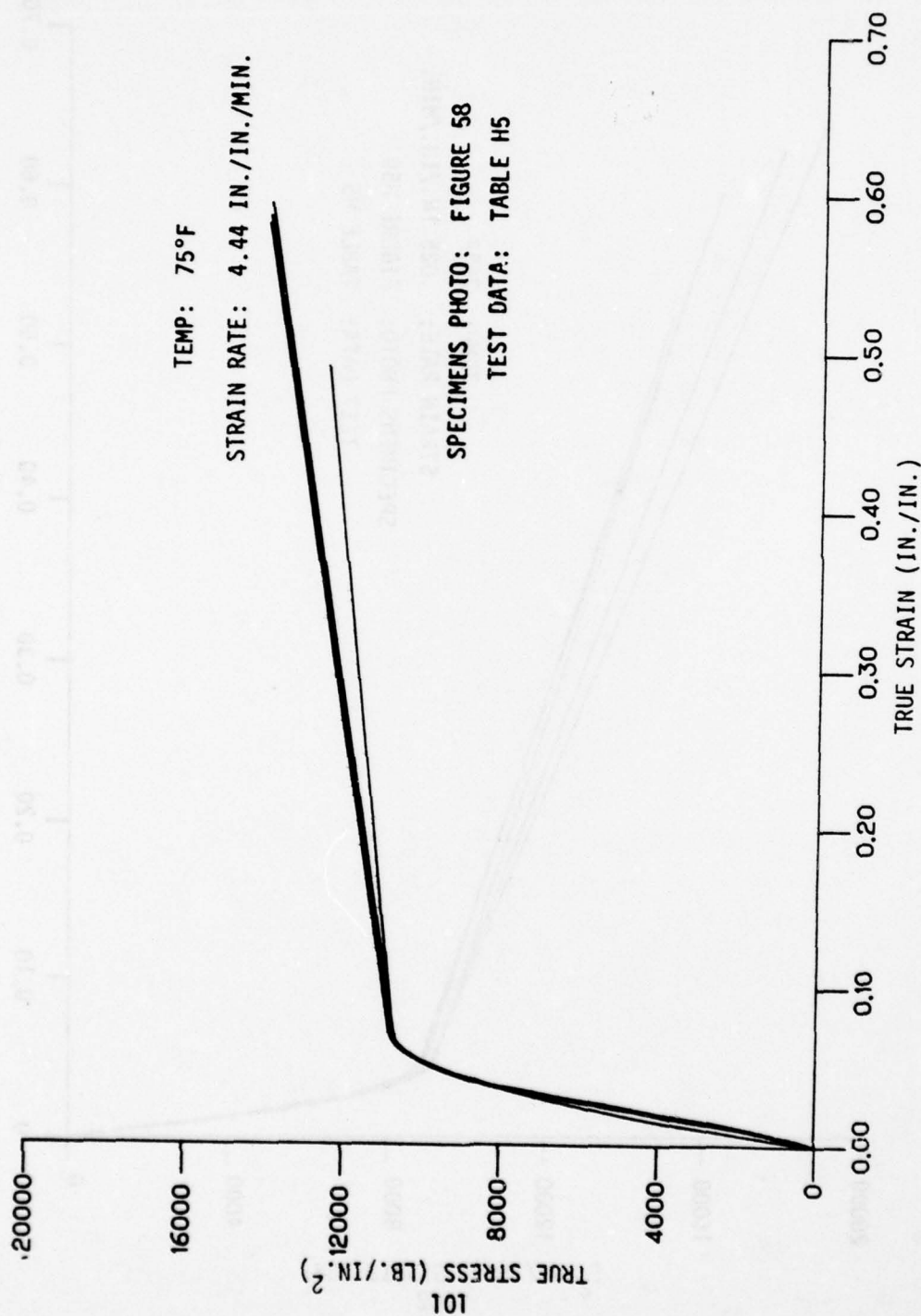


Figure H43. Tensile Test Curves (SK503 - 0.25 Polycarbonate).

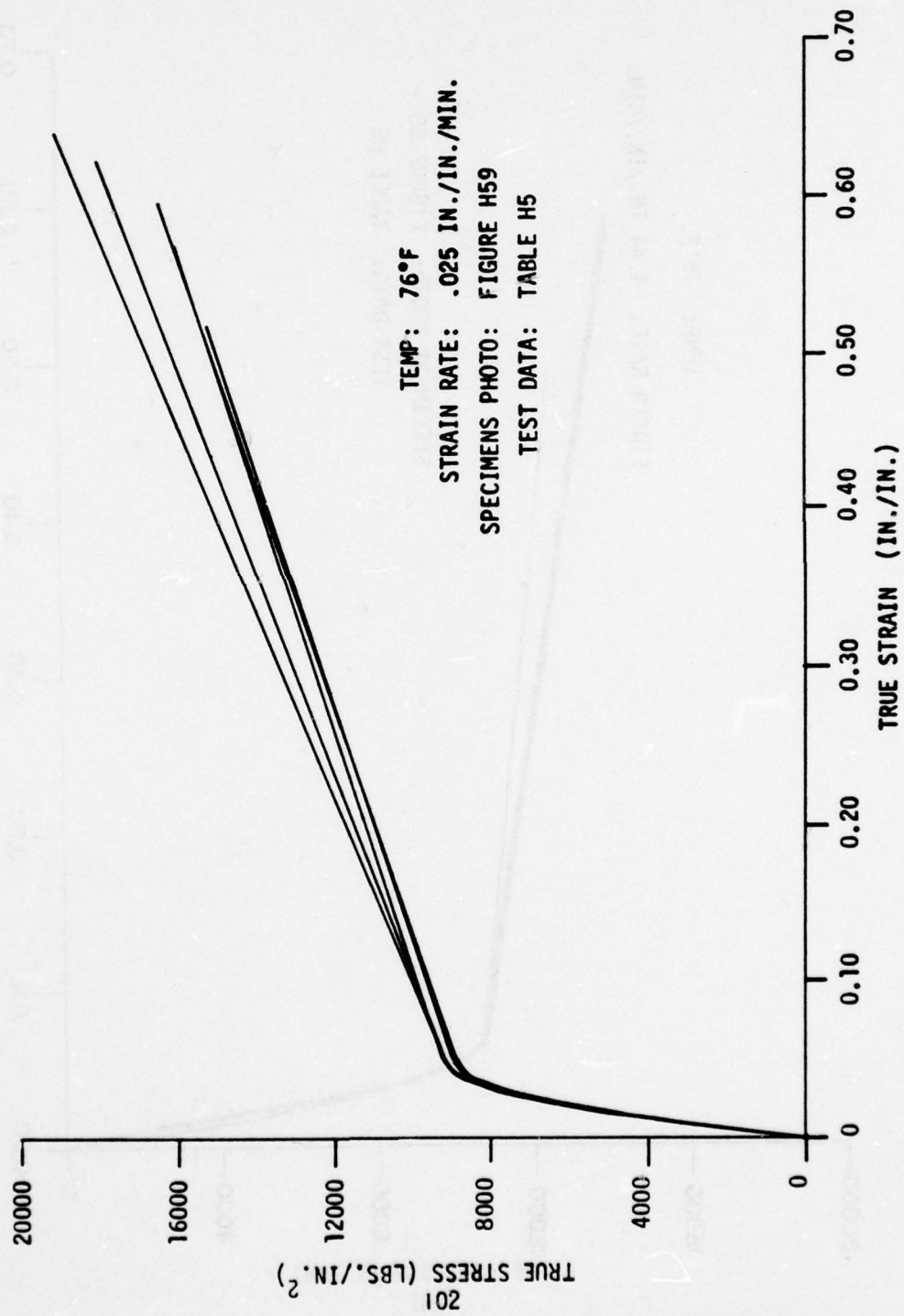


Figure H44 Tensile Test Curves (SK 503 - 0.250 Polycarbonate).

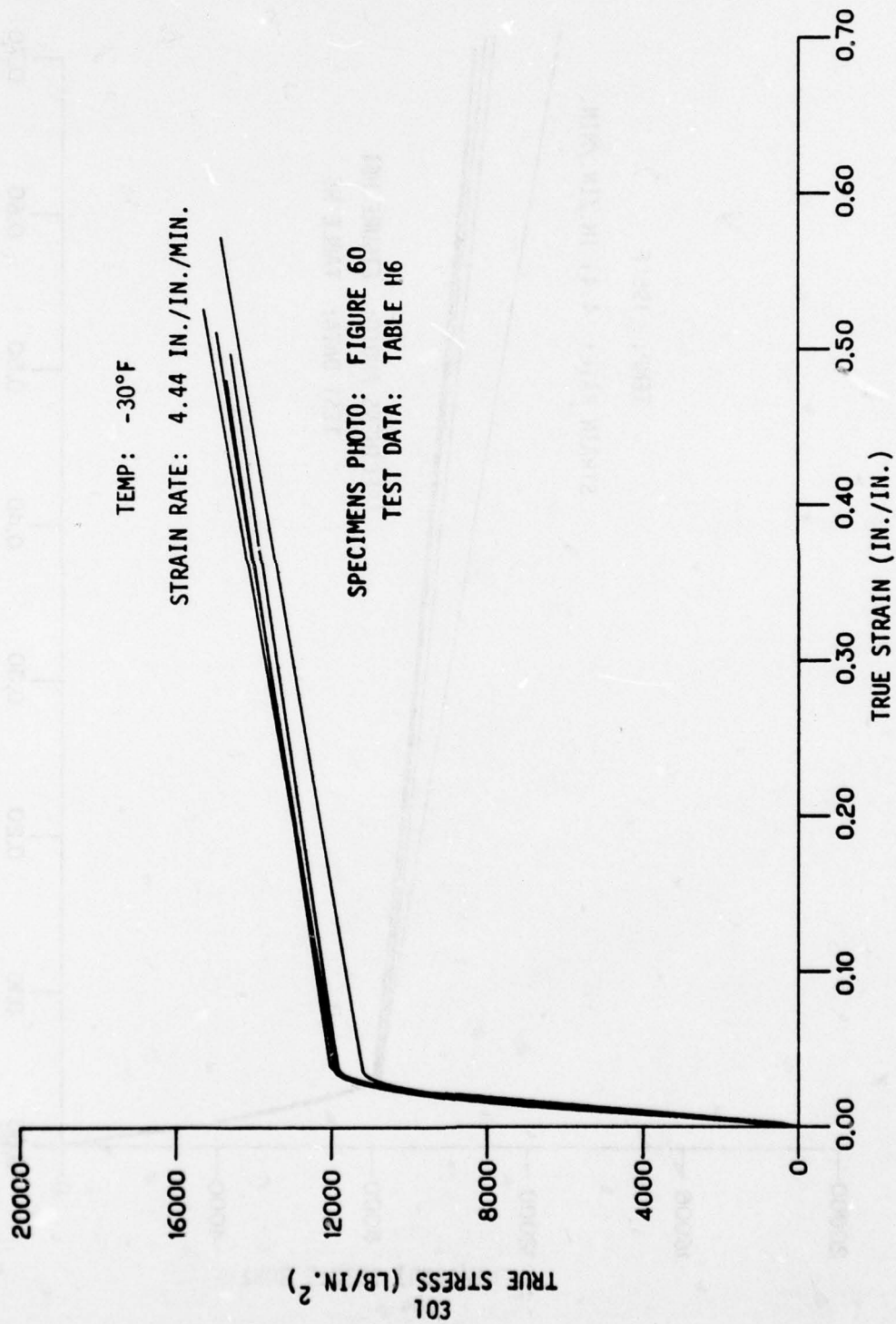


Figure H45. Tensile Test Curves (SK503 - 0.25 Polycarbonate)

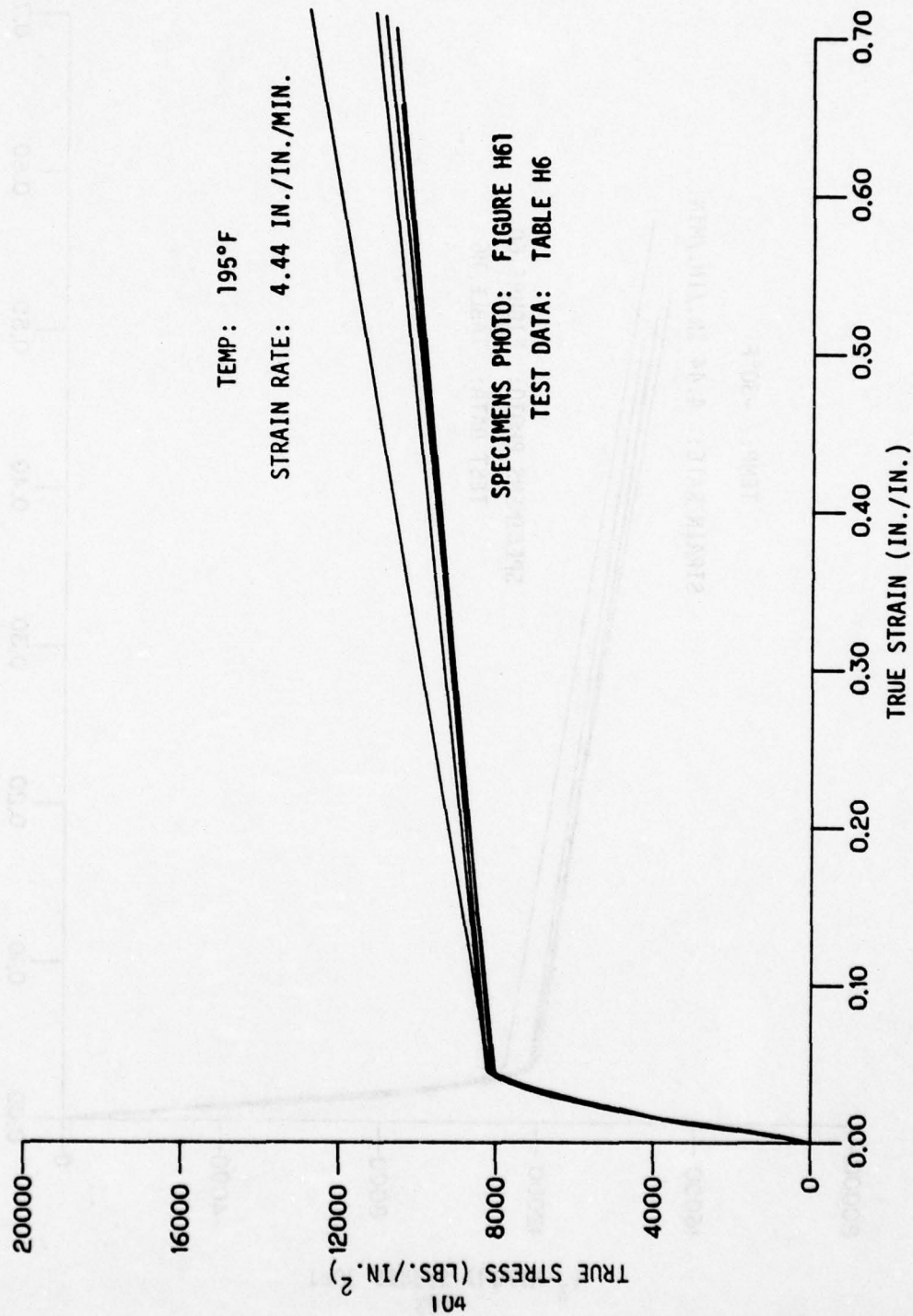


Figure H46. Tensile Test Curves (SK503 - 0.25 Polycarbonate)

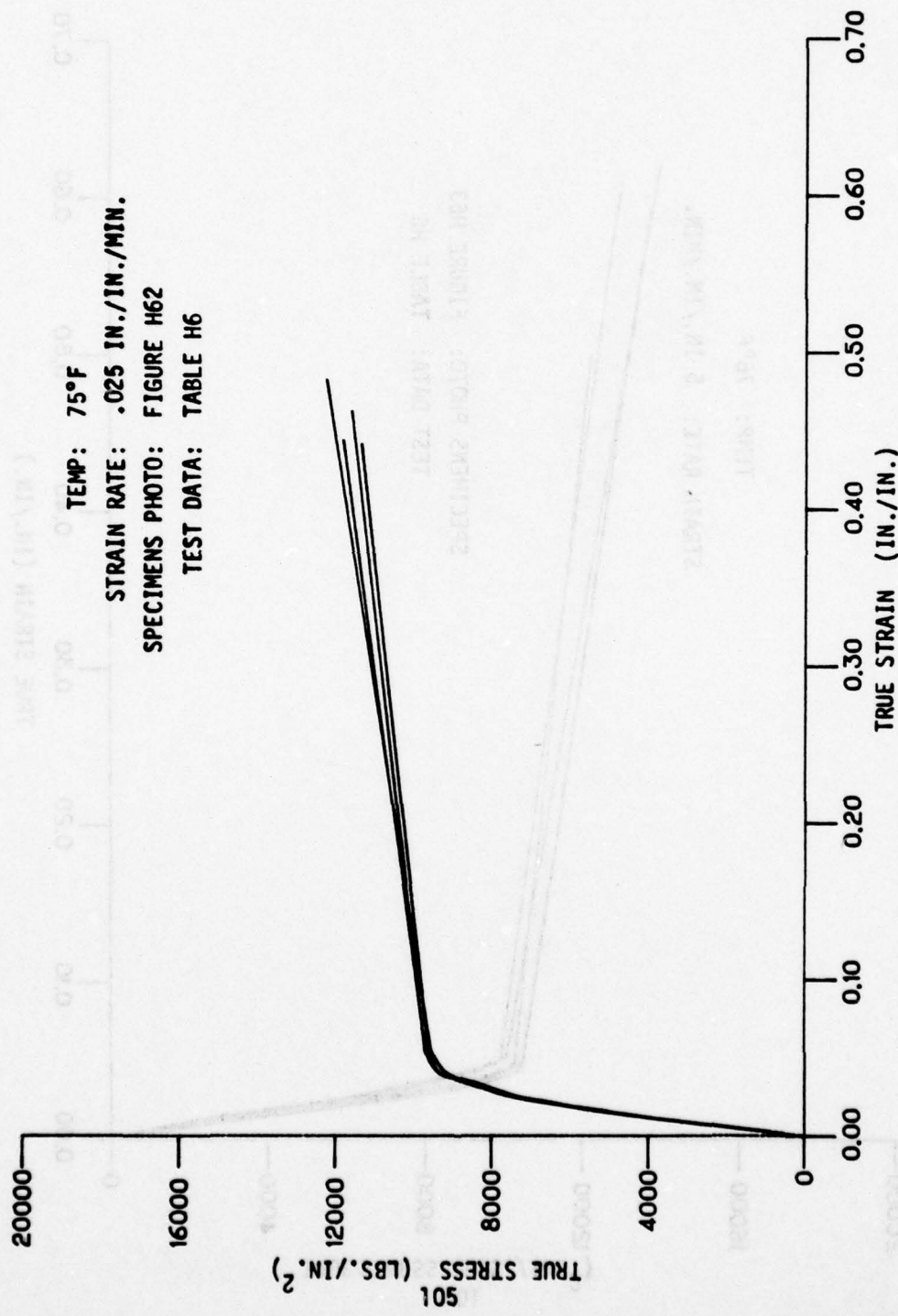


Figure H47 Tensile Test Curves (SWU 503 - .250 Polycarbonate).

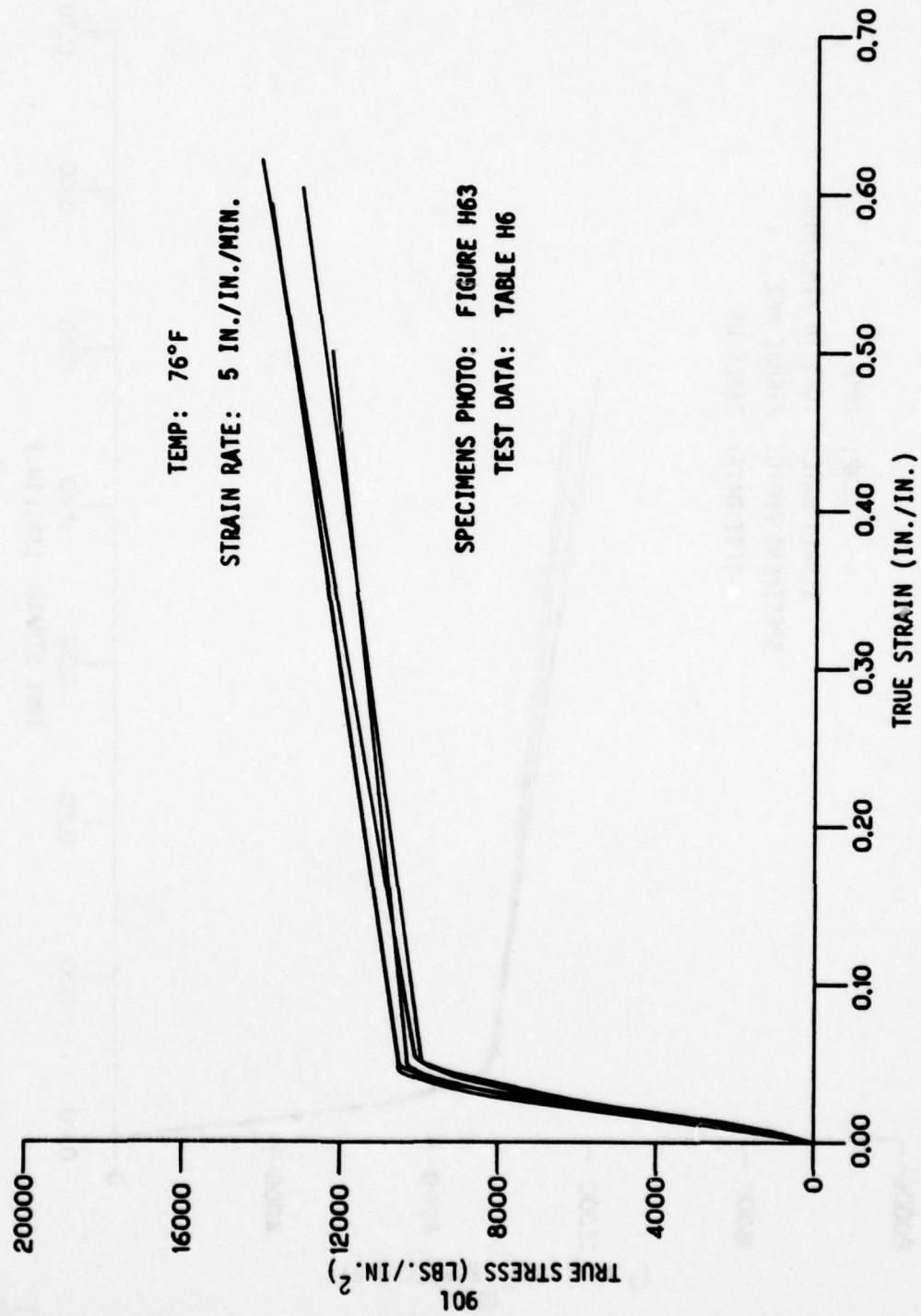


Figure H48. Tensile Test Curves (SMU503 - 0.25 polycarbonate)

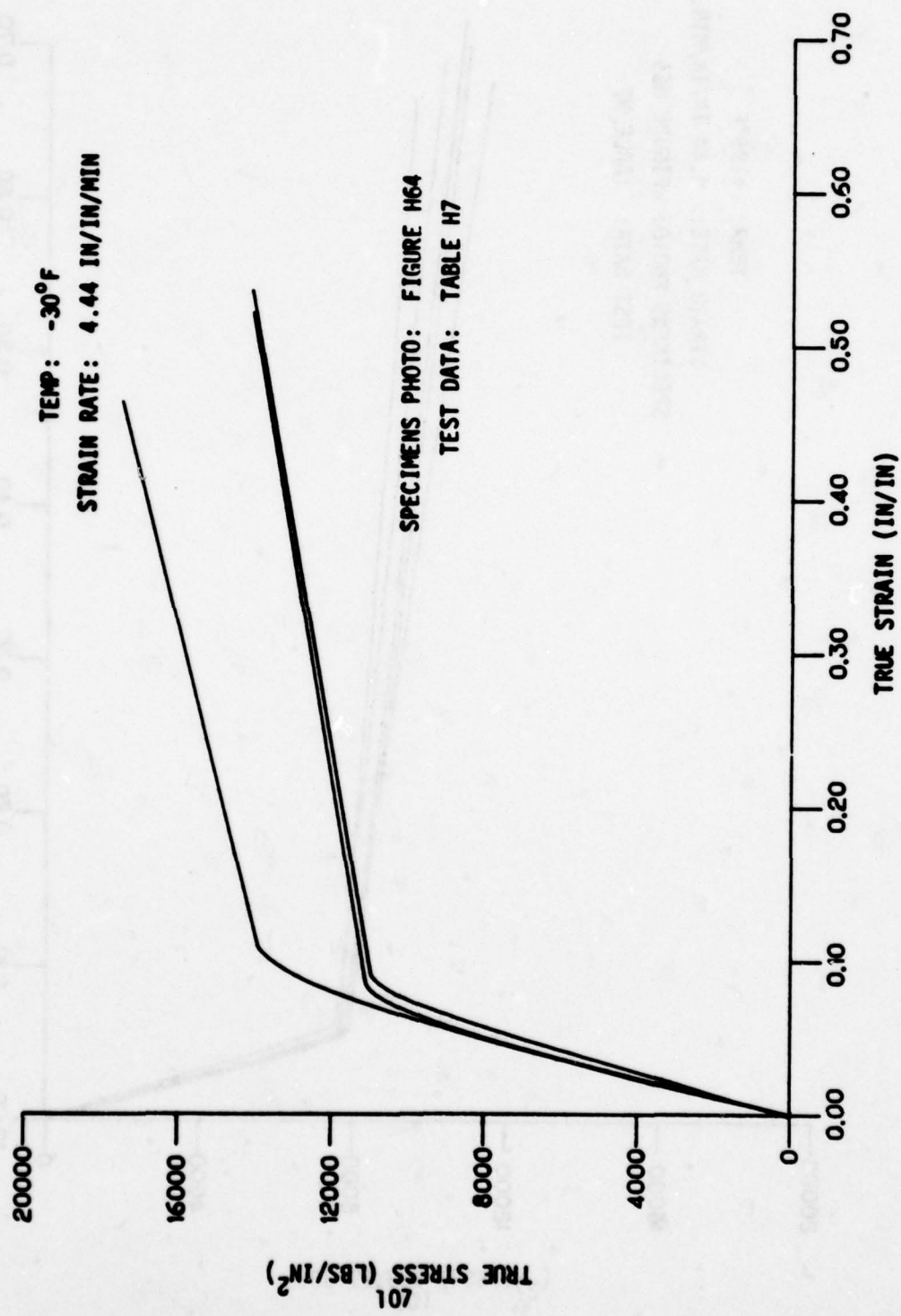


Figure H49. Tensile Test Curves (SMU503 - 0.250 Polycarbonate)

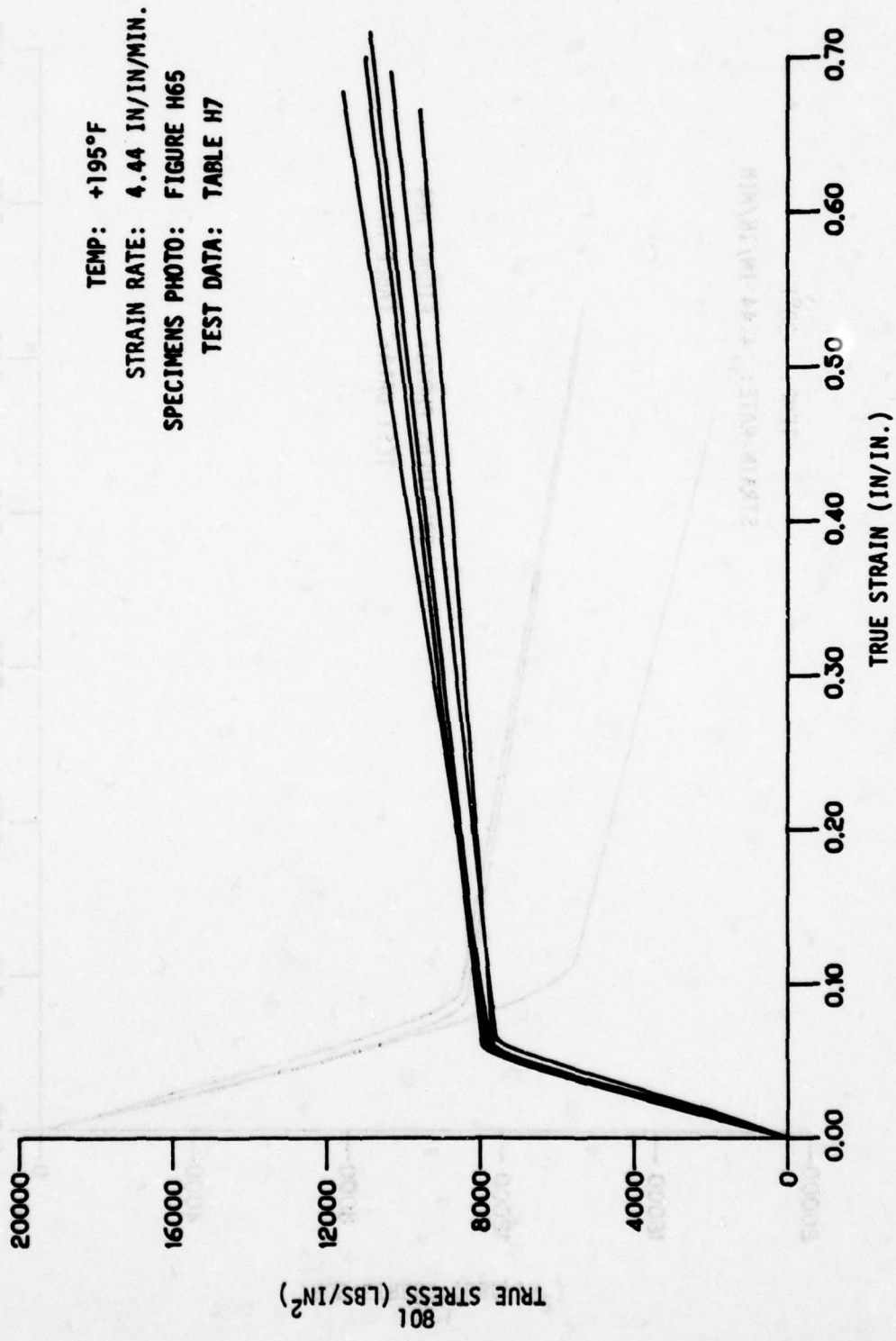


Figure H50. Tensile Test Curves (SMU503-0.25 Polycarbonate)

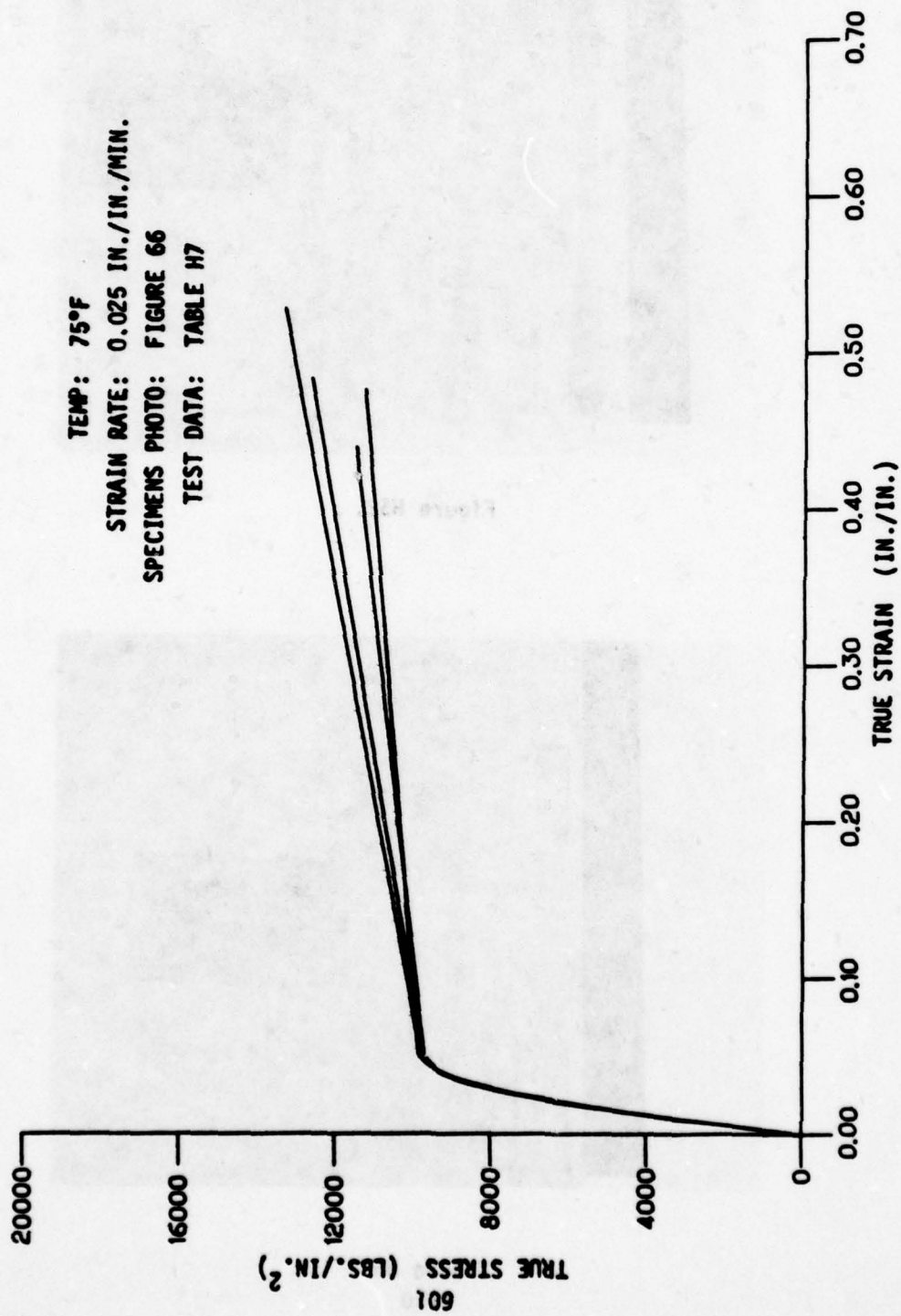


Figure H51 Tensile Test Curves (TEX 503X - 0.250 Polycarbonate).

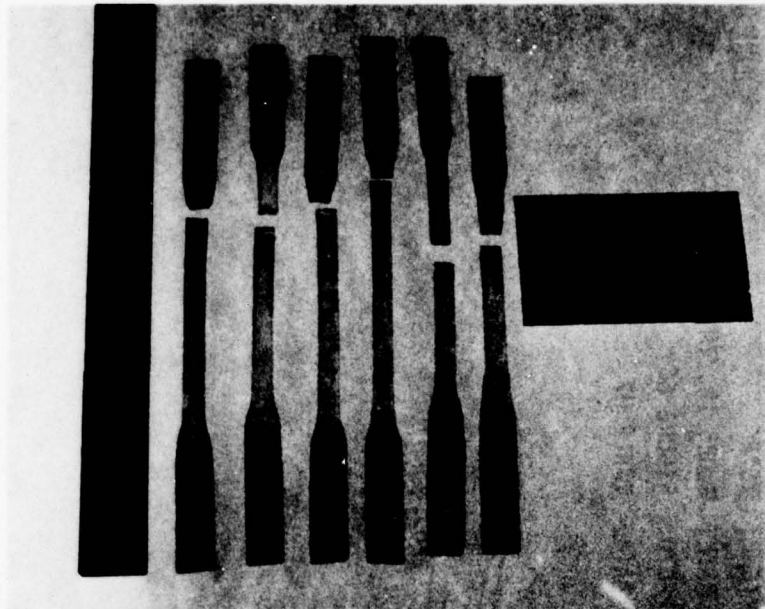


Figure H52.

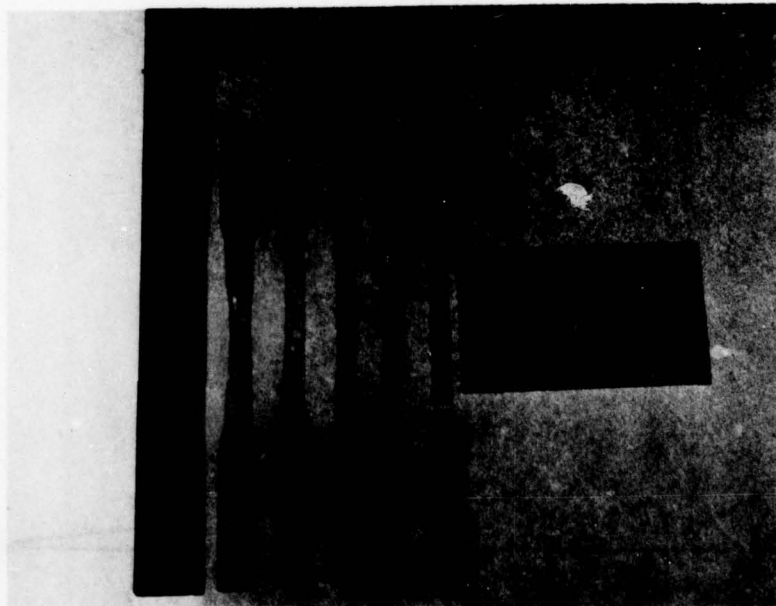


Figure H53.
110

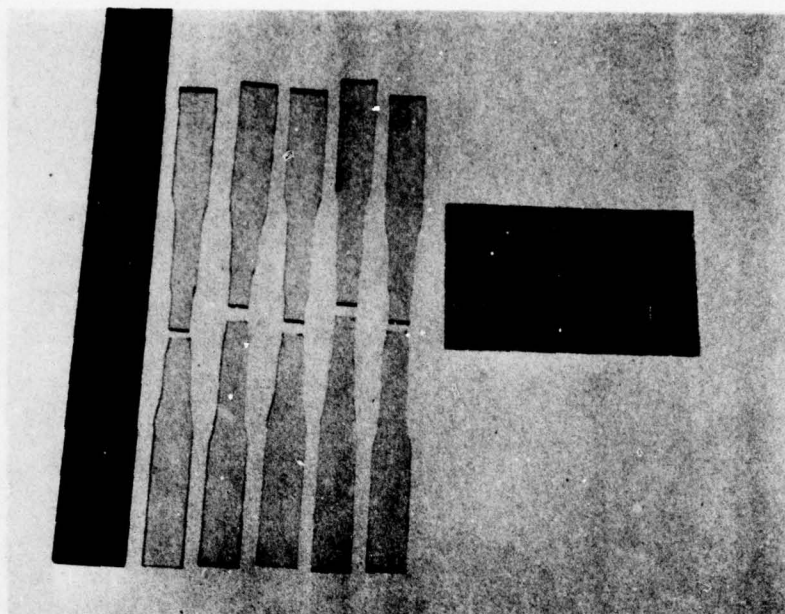


Figure H54.

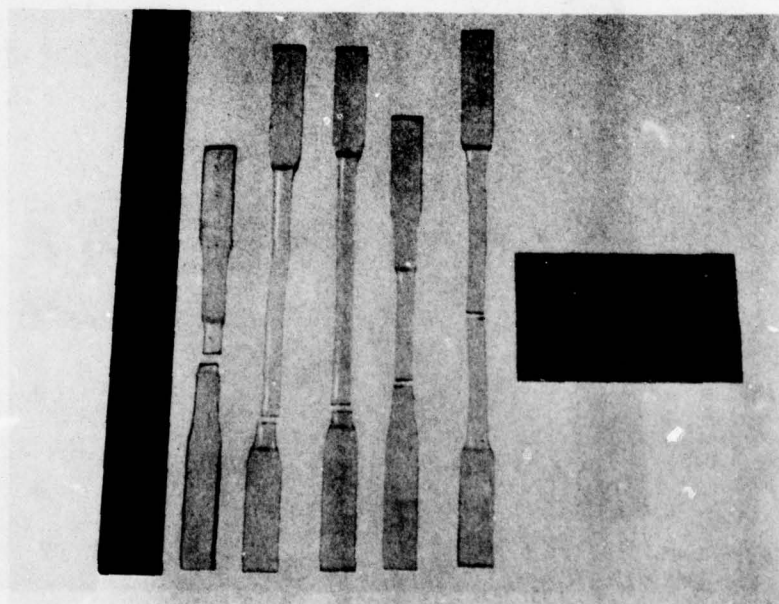


Figure H55.
111

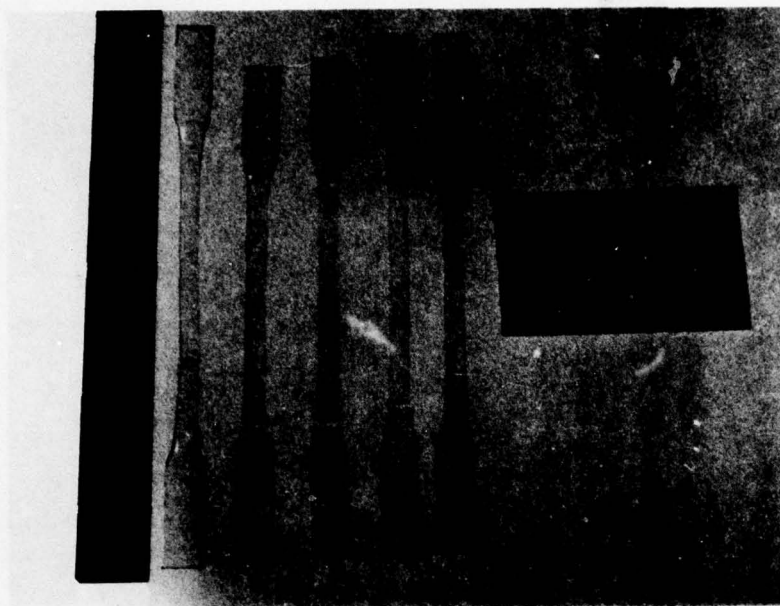


Figure H56.

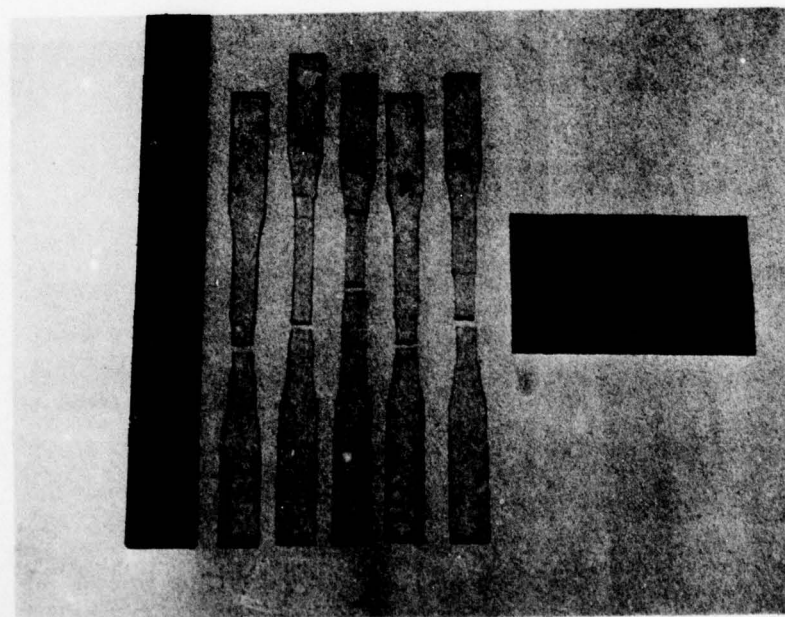


Figure H57.

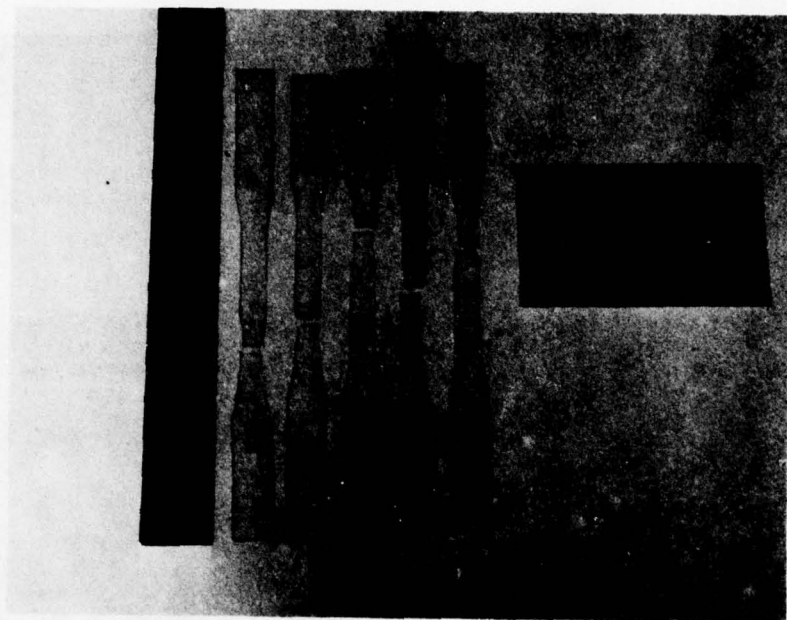


Figure H58.

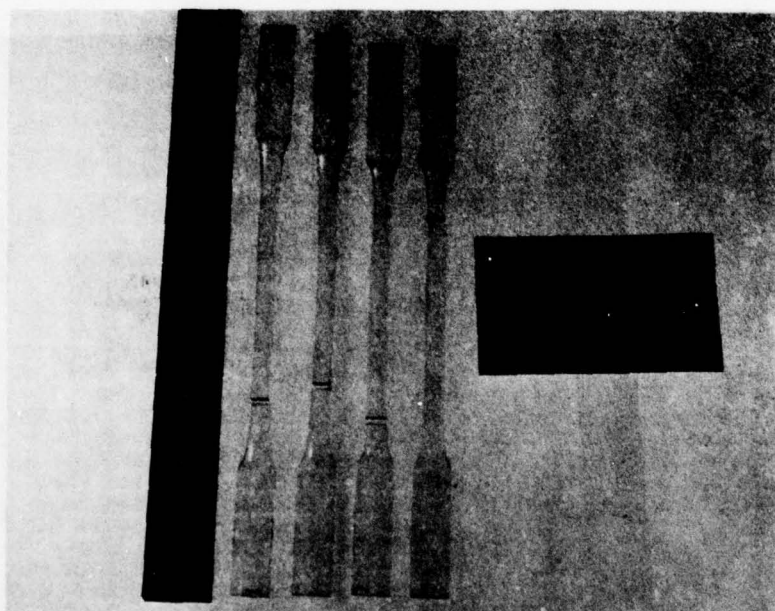


Figure H59.

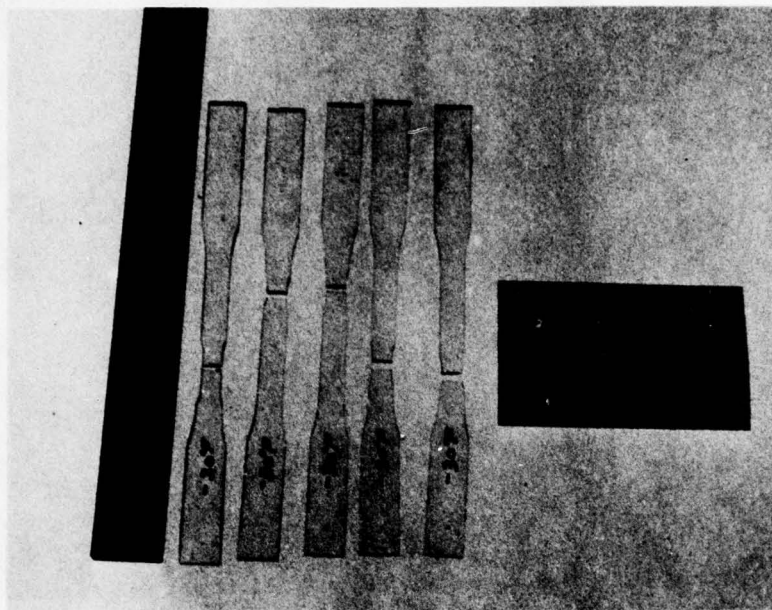


Figure H60.

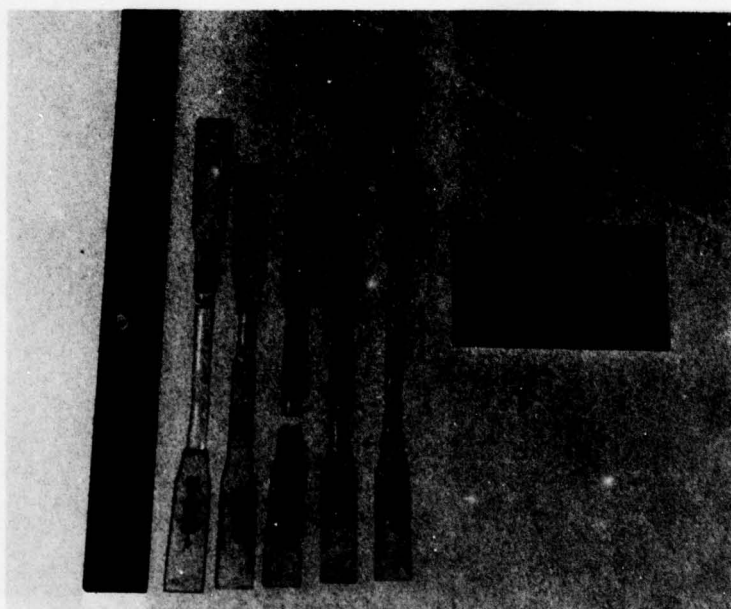


Figure H61
114

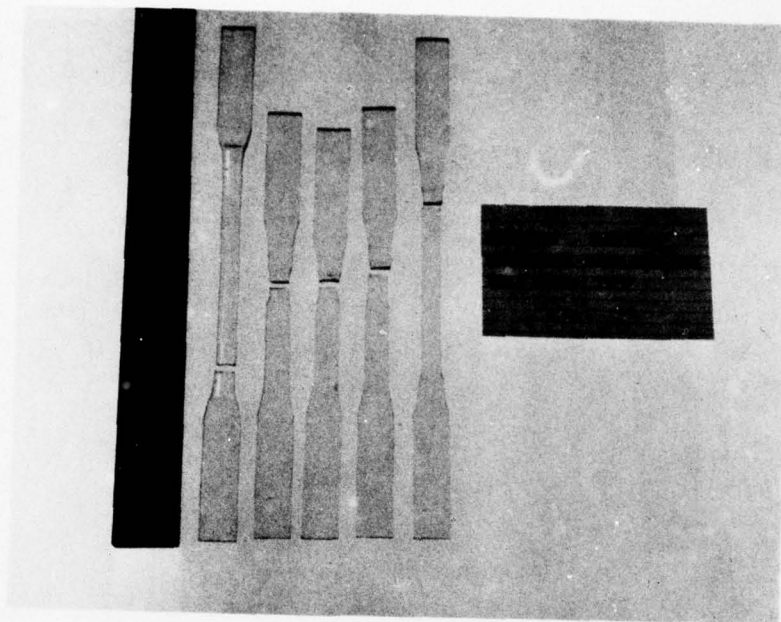


Figure H62.

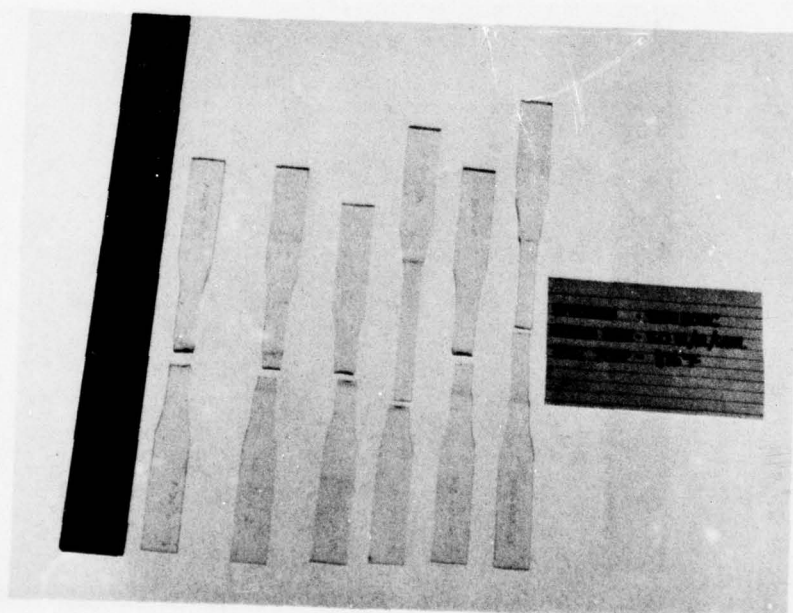


Figure H63.
115

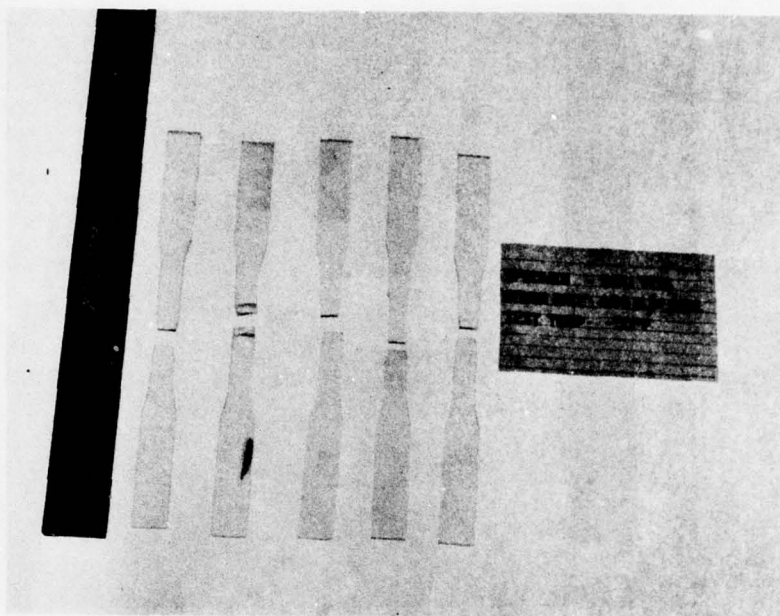


Figure H64.

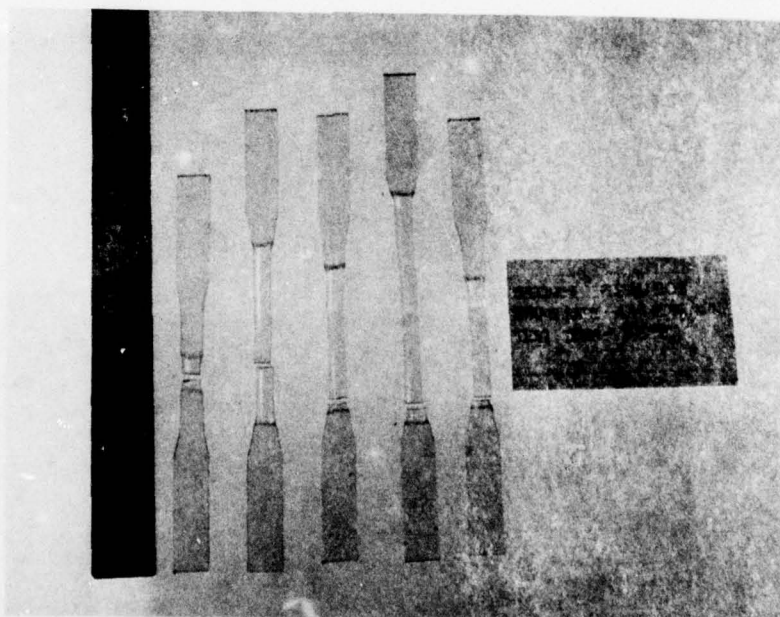


Figure H65.
116

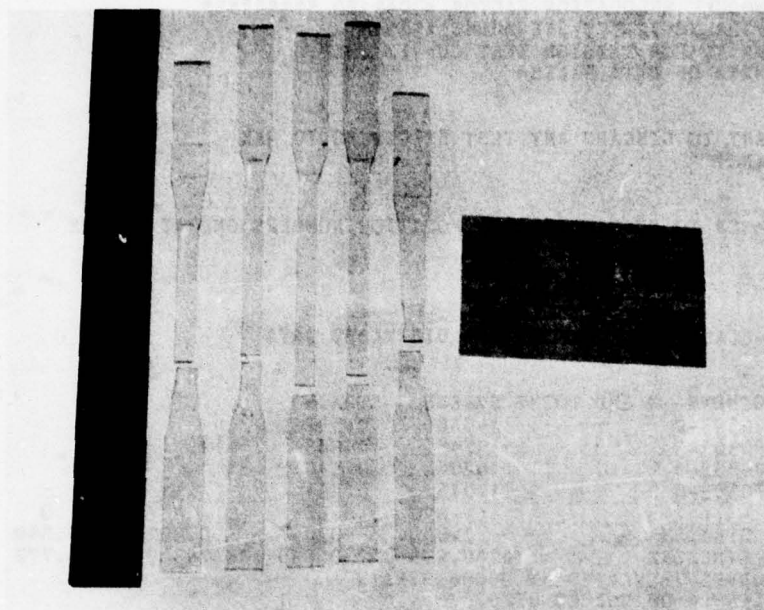


Figure 66.

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xx clst(stsstr) 'd1(ppg50302) 1(tekast)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1EO *****
TEKSST,CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
  ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
1
INPUT NUMBER TO BE DISCARDED & POSITION NUMBERS ONE AT A TIME
?
1
?
5
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 1
  TEST SPECIMENS-   END POINT STRESS   STRAIN
    1 PPG503-2           14548.      0.532
    2 PPG503-3           13795.      0.508
    3 PPG503-4           16206.      0.510
    4 PPG503-6           12015.      0.491
                                AVG   STD DEV
  FRACTURE STRAINS           = 0.510   0.017
  FRACTURE STRESSES           = 14140.975 1738.635
ORIGINAL CURVES TRUNCATED AT 0.056 STRAIN
BASE CURVE IS 4 OF CURVES USED.
  NOT NORMAL  STRAIN  SSTRESS  DCRIT  DCAC
                0.0156  5098.   0.3810  0.3992
  NOT NORMAL  STRAIN  SSTRESS  DCRIT  DCAC
                0.0200  6330.   0.3810  0.3881
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
                                AVG   STD DEV
  YIELD STRESS           = 9707.039   61.829
  SECANT TO YIELD STRESS = 173926.863
                                A       B       C
                                9271.642 9449.709 9545.172
                                166126. 169316. 171027.
                                AVG       A       B       C
  PC NO.  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC
    2  0.007 361628. 0.007 330327. 0.007 343128. 0.007 349991.
    4  0.015 330148. 0.015 309872. 0.015 318164. 0.015 322610.
    6  0.022 311460. 0.022 275112. 0.022 289978. 0.022 297947.
    8  0.034 252896. 0.034 236589. 0.034 243258. 0.034 246834.
STRAIN AT 2ND PT ON BASE CURVE= 0.003
                                STRAIN  STD DEV
  ELASTIC MODULUS AT 0.003  5155. 361057. 343822.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 361040.
AREA UNDER AVERAGE DESIGN CURVE= 5793.837

```

Figure H67. Computer Run PPG503

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ex clat(atastr) 'd(ppg50301) g(a77623.d0211.(eq001) l((test) a(ppg50301)'
1222 LOAD MODULE RELOCATION FACTOR = 0AFF38 12222222
TEKST,CMG 12C, 1-26-78, J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.00692 1000
IKJS4017A TERMINAL ERROR, REENTER INPUT
.00692 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 PPG503-2 16395. 0.643
2 PPG503-3 16378. 0.642
3 PPG503-4 15148. 0.579
4 PPG503-5 13771. 0.583
5 PPG503-16 17313. 0.676
      AUG STD DEV
FRACTURE STRAINS = 0.625 0.042
FRACTURE STRESSES = 15903.002 1443.364 7616.652 10985.462 12790.770
ORIGINAL CURVES TRUNCATED AT 0.054 STRAIN
BASE CURVE IS 3 OF CURVES USED.
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0161 4220. 0.3370 0.3813
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0221 5882. 0.3370 0.3746
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
      AUG STD DEV
YIELD STRESS = 10212.677 57.446 9882.879 10016.908 10089.168
SECANT TO YIELD STRESS = 187813.588 181749. 184214. 185542.
      AUG
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.010 256350. 0.010 155128. 0.010 196280. 0.010 218443.
4 0.028 259764. 0.028 224114. 0.028 238607. 0.028 246413.
6 0.042 228360. 0.042 213047. 0.042 222240. 0.042 224498.
8 0.054 187814. 0.054 181749. 0.054 184214. 0.054 185542.
STRAIN AT 2ND PT ON BASE CURVE = 0.010
      STRAIN STD DEV
ELASTIC MODULUS AT 0.010 17242. 261683. 354736. 316906. 296532.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES = 261690.
WARNING-MAX SLOPE(E) = 279140. AT STRAIN = 0.019
AREA UNDER AVERAGE DESIGN CURVE = 7793.440

```

Figure H68. Computer Run PPG503

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EX CLST(STSSTR) 'D1(PPG50306) G(E77623 D0211 FEG002) L(TEK55T) A(PPG50306)
XXXX LOAD MODULE RELOCATION FACTOR = 0AFF30 XXXXXXXXX
TEK55T.CHG 18C. 1-26-78. J F BURKE X37644
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS.10 MAX
(1=YES.2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
00523 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 PPG503-6 12749 0.283
2 PPG503-7 18085 0.566
3 PPG503-7 15741 0.589
4 PPG503-8 16535 0.446
5 PPG503-10 14000 0.517
      AUG STD DEV
FRACTURE STRAINS = 0.480 0.123 -0.227 0.061 0.216
FRACTURE STRESSES = 15422.002 2097.548 3379.867 8275.500 10012.238
ORIGINAL CURVES TRUNCATED AT 0.122 STRAIN
BASE CURVE IS 4 OF CURVES USED
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE
      AUG STD DEV
YIELD STRESS = 12239.791 1030.810 6323.062 8728.545 10023.591
SECANT TO YIELD STRESS = 100136.844 51730. 71410. 88008.
      AUG
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.024 138837. 0.024 26386. 0.024 72103. 0.024 96724.
4 0.046 141569. 0.046 55363. 0.046 90410. 0.046 100285.
6 0.069 135610. 0.069 91004. 0.069 109138. 0.069 110205.
8 0.093 121636. 0.093 83483. 0.093 98994. 0.093 107340.
STRAIN AT END PT ON BASE CURVE = 0.012
      STRAIN STD DEV
ELASTIC MODULUS AT 0.012 21763. 139384. 22347. 60904. 88518.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES = 139660.
WARNING-MAX SLOPE(E) = 147393. AT STRAIN = 0.024
AREA UNDER AVERAGE DESIGN CURVE = 5884.520

```

Figure H69. Computer Run PPG503

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EX CLST(STSSTR) 'D1(PPG50311) Q(ET7823 D0211 FE0003) L(TEKST) A(PPG50311)'
**** LOAD MODULE RELOCATION FACTOR = 000730 *****
TEKST.CMG 18C. 1-26-78, J.F. BURKE X37644
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS.10 MAX
(1=YES.2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
00023 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 PPG503 -11 0030 0.021
2 PPG503 -12 12134 0.744
3 PPG503 -13 11448 0.677
4 PPG503 -14 0004 0.005
5 PPG503 -15 12118 0.634
      AUG STD DEV
FRACTURE STRAINS - 0.000 0.040 0.450 0.143 0.104
FRACTURE STRESSES - 11035.000 1314.070 3401.023 0000.003 0010.040
ORIGINAL CURVES TRUNCATED AT 0.078 STRAIN
BASE CURVE IS 4 OF CURVES USED
NOT NORMAL STRAIN STRESS SCRT DCAC
0.0401 0000 0.370 0.120
0.0003 0414 0.370 0.120
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
YIELD STRESS - 7007.004 117.770 0001.700 7000.003 7404.019
SECANT TO YIELD STRESS -100434.078 07007 100000 100010
      AUG STD DEV
PG NO STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
1 0.007 127440 0.007 07030 0.007 103404 0.007 110310
4 0.040 127040 0.040 00000 0.040 100574 0.040 110000
0 0.004 110170 0.004 07004 0.004 100140 0.004 110000
0 0.078 100435 0.078 07007 0.078 100000 0.078 100010
STRAIN AT END PT ON BASE CURVE= 0.014
ELASTIC MODULUS AT 0.014 0000 100000 07001 100310 110400
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 100000
WARNING-MAX SLOPE(E)= 131000 AT STRAIN= 0.004
AREA UNDER AVERAGE DESIGN CURVE= 0000.170

```

Figure H70. Computer Run PPG503

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TEST SPECIMENS-	END POINT STRESS	STRAIN					
1 PPG517-1	14281.	0.516					
2 PPG517-2	17045.	0.616					
3 PPG517-3	16228.	0.576					
4 PPG517-4	16623.	0.581					
5 PPG517-5	18839.	0.694					
	AVG	STD DEV	A	B	C		
FRACTURE STRAINS	= 0.597	0.065	0.221	0.374	0.456		
FRACTURE STRESSES	= 16602.931	1637.796	7200.344	11022.968	13081.669		
ORIGINAL CURVES TRUNCATED AT 0.161 STRAIN							
BASE CURVE IS 2 OF CURVES USED.							
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC			
	0.0017	559.	0.3370	0.3893			
	0.0032	1013.	0.3370	0.3757			
	0.0046	1472.	0.3370	0.3745			
	0.0061	1935.	0.3370	0.3772			
	0.0076	2404.	0.3370	0.3814			
	0.0091	2877.	0.3370	0.3879			
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC			
	0.0091	2877.	0.3370	0.3879			
	0.0100	3396.	0.3370	0.4006			
	0.0124	3886.	0.3370	0.4061			
	0.0141	4344.	0.3370	0.4052			
	0.0150	4775.	0.3370	0.4010			
	0.0176	5182.	0.3370	0.4003			
	0.0193	5567.	0.3370	0.4031			
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC			
	0.0193	5567.	0.3370	0.4031			
	0.0211	5932.	0.3370	0.4091			
	0.0229	6275.	0.3370	0.4160			
	0.0247	6589.	0.3370	0.4202			
	0.0266	6870.	0.3370	0.4200			
	0.0284	7121.	0.3370	0.4162			
	0.0303	7340.	0.3370	0.4122			
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC			
	0.0303	7340.	0.3370	0.4122			
	0.0323	7562.	0.3370	0.4090			
	0.0343	7762.	0.3370	0.4095			
	0.0363	7953.	0.3370	0.4109			
	0.0384	8136.	0.3370	0.4133			
	0.0404	8311.	0.3370	0.4156			
	0.0425	8456.	0.3370	0.4132			
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC			
	0.0425	8456.	0.3370	0.4132			
	0.0447	8576.	0.3370	0.4097			
	0.0470	8673.	0.3370	0.4090			
	0.0494	8755.	0.3370	0.4080			
	0.0519	8823.	0.3370	0.4079			
	0.0545	8877.	0.3370	0.4057			
	0.0574	8910.	0.3370	0.4010			
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC			
	0.0574	8910.	0.3370	0.4010			
	0.0593	8940.	0.3370	0.3979			
	0.0614	8959.	0.3370	0.3932			
	0.0635	8978.	0.3370	0.3876			
	0.0657	9000.	0.3370	0.3819			
	0.0679	9026.	0.3370	0.3767			
	0.0702	9053.	0.3370	0.3711			
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC			
	0.0702	9053.	0.3370	0.3711			
	0.0726	9082.	0.3370	0.3649			
	0.0751	9111.	0.3370	0.3582			
	0.0777	9141.	0.3370	0.3509			
	0.0805	9174.	0.3370	0.3429			
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.							
	AVG	STD DEV	A	B	C		
YIELD STRESS	= 10314.610	654.406	6557.206	8084.777	8907.466		
SECANT TO YIELD STRESS	= 64101.761		40751.	50244.	55357.		
	AVG	A	B	C			
PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN
2	0.009	294749.	0.009	-250806.	0.009	-33806.	0.009
4	0.030	224909.	0.030	-127657.	0.030	15679.	0.030
6	0.057	148902.	0.057	7423.	0.057	64974.	0.057
8	0.087	106019.	0.087	40144.	0.087	71673.	0.087
STRAIN AT 2ND PT ON BASE CURVE= 0.000							
	STRAIN	STD DEV	AVG	A	B	C	
ELASTIC MODULUS AT 0.000	103800.	303049.	-274530.	-39720.	86743.		
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 302012.							
AREA UNDER AVERAGE DESIGN CURVE= 7104.050							

Figure H71. Computer Run PPG517

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ex clst(stsstr) 'd1(sk50306) 1(tekst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 *****
TEKSST,CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SK503-6 12448. 0.576
2 SK503-7 12483. 0.558
3 SK503-8 12638. 0.581
4 SK503-9 12640. 0.561
5 SK503-10 12881. 0.572
AVG STD DEV A B C
FRACTURE STRAINS = 0.570 0.010 0.514 0.536 0.549
FRACTURE STRESSES = 12618.000 171.156 11635.391 12034.870 12250.014
ORIGINAL CURVES TRUNCATED AT 0.054 STRAIN
BASE CURVE IS 4 OF CURVES USED.
NOT NORMAL STRAIN STRESS DCRT DCAC
0.0441 9622. 0.3370 0.3433
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AVG STD DEV A B C
YIELD STRESS = 9815.893 72.385 9400.332 9569.278 9660.266
SECANT TO YIELD STRESS = 180108.133 172483. 175583. 177253.
AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.009 338964. 0.009 281076. 0.009 304610. 0.009 317285.
4 0.019 319208. 0.019 257648. 0.019 282675. 0.019 296154.
6 0.029 280557. 0.029 255801. 0.029 265865. 0.029 271286.
8 0.046 213393. 0.046 205796. 0.046 208884. 0.046 210549.
STRAIN AT 2ND PT ON BASE CURVE= 0.004
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.004 5568. 338335. 321291. 328220. 331952.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 338244.
AREA UNDER AVERAGE DESIGN CURVE= 6148.992

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Figure H72. Computer Run SK503

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TEST SPECIMENS--	END POINT STRESS	STRAIN			
1 SK503-15	14006.	0.593			
2 SK503-14	13901.	0.569			
3 SK503-13	14038.	0.585			
4 SK503-12	12516.	0.491			
5 SK503-11	14060.	0.580			

STRAIN AT FRACTURE POINT IS NOT NORMAL

NOT NORMAL	STRAIN	SSTRESS	AVG	STD DEV	A	B	C
	0.5690	13901.	0.3370	0.4161			
FRACTURE STRAINS	=	0.564	0.042		0.325	0.422	0.474
FRACTURE STRESSES	=	13704.100	667.014		9874.773	11431.584	12270.020

ORIGINAL CURVES TRUNCATED AT 0.069 STRAIN
BASE CURVE IS 5 OF CURVES USED.

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0051	881.	0.3370	0.3556
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0051	881.	0.3370	0.3556
	0.0059	1038.	0.3370	0.3681
	0.0068	1201.	0.3370	0.3771
	0.0076	1369.	0.3370	0.3851
	0.0085	1553.	0.3370	0.3809
	0.0094	1743.	0.3370	0.3771
	0.0103	1933.	0.3370	0.3808
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0103	1933.	0.3370	0.3808
	0.0111	2159.	0.3370	0.3581
	0.0120	2379.	0.3370	0.3407
	0.0128	2580.	0.3370	0.3396
	0.0137	2778.	0.3370	0.3440
	0.0146	2990.	0.3370	0.3422
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0189	4034.	0.3370	0.3430
	0.0196	4180.	0.3370	0.3476
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0196	4180.	0.3370	0.3476
	0.0205	4355.	0.3370	0.3545
	0.0213	4552.	0.3370	0.3522
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0516	9905.	0.3370	0.3469
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0583	10404.	0.3370	0.3611
	0.0590	10448.	0.3370	0.3595
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0590	10448.	0.3370	0.3595
	0.0600	10501.	0.3370	0.3378
	0.0610	10550.	0.3370	0.3505
	0.0620	10594.	0.3370	0.3607

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

YIELD STRESS	AVG	STD DEV	A	B	C
= 10724.673	45.369	10464.212	10570.102	10627.131	
SECANT TO YIELD STRESS	= 154900.327		151216.	152747.	153571.

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.010	197551.	0.010	-62216.	0.010	43392.	0.010	100269.
4	0.020	216163.	0.020	76788.	0.020	133450.	0.020	163967.
6	0.032	220324.	0.032	181851.	0.032	197492.	0.032	205916.
8	0.048	197914.	0.048	191515.	0.048	194117.	0.048	195518.

STRAIN AT 2ND PT ON BASE CURVE= 0.005

ELASTIC MODULUS AT 0.005	STRAIN	STD DEV	AVG	A	B	C
	42278.	202572.	-600.	81999.	126484.	

CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 198997.
WARNING-MAX SLOPE(E)= 249302. AT STRAIN= 0.017
AREA UNDER AVERAGE DESIGN CURVE= 6502.328

Figure H73. Computer Run SK503
124

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ex clst(stsstr) 'd1(sk503al) 1(tekst)'
**** LOAD MODULE RELOCATION FACTOR = 0001E0 *****
TEKST,CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.1 1000
TEST SPECIMENS-   END POINT STRESS   STRAIN
1 SK503-1         19105.             0.639
2 SK503-2         18029.             0.621
3 SK503-3         16045.             0.567
4 SK503-4         15220.             0.517
5 SK503-5         16450.             0.594
                                AVG   STD DEV
FRACTURE STRAINS           =    0.588    0.048
FRACTURE STRESSES          = 16971.539 1570.007
ORIGINAL CURVES TRUNCATED AT 0.055 STRAIN
BASE CURVE IS 2 OF CURVES USED.
NOT NORMAL   STRAIN   SSTRESS   DCRIT   DCAC
0.0017       561.    0.3370   0.4147
0.0034       1120.   0.3370   0.4186
0.0051       1680.   0.3370   0.4072
0.0060       2240.   0.3370   0.3920
0.0085       2800.   0.3370   0.3741
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
                                AVG   STD DEV
YIELD STRESS              =  9178.224 155.328
SECANT TO YIELD STRESS     = 167730.660
                                A       B       C
                                8286.487 8649.022 8844.269
                                151434. 150060. 161628.
                                AVG       A       B       C
PC NO.  STRAIN  SEC   STRAIN  SEC   STRAIN  SEC   STRAIN  SEC
2  0.014 315621.  0.014 279563.  0.014 294223.  0.014 302118.
4  0.019 298409.  0.019 253150.  0.019 271550.  0.019 281459.
6  0.026 273066.  0.026 241804.  0.026 254514.  0.026 261359.
8  0.034 241979.  0.034 218674.  0.034 228149.  0.034 233251.
STRAIN AT 2ND PT ON BASE CURVE= 0.010
                                STRAIN  STD DEV   AVG       A       B       C
ELASTIC MODULUS AT 0.010   54980.  299261.  140165.  204846.  239680.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 293500.
WARNING-MAX SLOPE(E)= 321776. AT STRAIN= 0.014
AREA UNDER AVERAGE DESIGN CURVE= 7316.554

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Figure H74. Computer Run SK503

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ex cist(stsstr) 'd1(sk50301) q(e77623.d0211.feg007) l(tekast) a(sk50301)'
**** LOAD MODULE RELOCATION FACTOR = 8AFF38 *****
TEKST,CHG 12C, 1-26-78; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.00523 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SK503-1 14814. 0.572
2 SK503-2 14551. 0.497
3 SK503-3 15251. 0.526
4 SK503-4 14921. 0.511
5 SK503-5 14665. 0.480
          AVG STD DEV A C
FRACTURE STRAINS = 0.517 0.035 0.316 0.398 0.442
FRACTURE STRESSES = 14840.420 269.383 13293.894 13922.633 14261.247
ORIGINAL CURVES TRUNCATED AT 0.039 STRAIN
BASE CURVE IS 5 OF CURVES USED.
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0317 11489. 0.3370 0.3586
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0317 11489. 0.3370 0.3586
0.0328 11615. 0.3370 0.3944
0.0340 11707. 0.3370 0.4032
0.0353 11762. 0.3370 0.3872
0.0366 11805. 0.3370 0.3823
0.0379 11831. 0.3370 0.3818
0.0392 11839. 0.3370 0.3732
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
          AVG STD DEV A C
YIELD STRESS = 11779.652 322.718 9926.927 10680.151 11005.808
SECANT TO YIELD STRESS = 300309.790 253077. 272279. 282621.
          AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.004 358734. 0.004 -43147. 0.004 120238. 0.004 208230.
4 0.006 407737. 0.006 49975. 0.006 19113. 0.006 273756.
6 0.009 436159. 0.009 97282. 0.009 235052. 0.009 309250.
8 0.012 451675. 0.012 127455. 0.012 259266. 0.012 330255.
STRAIN AT 2ND PT ON BASE CURVE= 0.002
          STRAIN STD DEV AVG A C
ELASTIC MODULUS AT 0.002 69485. 354058. -4.133. 117186. 204561.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 354400.
WARNING-MAX SLOPE(E)= 515026. AT STRAIN= 0.007
AREA UNDER AVERAGE DESIGN CURVE= 6661.127

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Figure H75. Computer Run SK503

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EX CLST(SSTST) 'D1(SK50316) G(E77623.00211.FEC008) L(TEKSSST)
1231 LOW MODULE RELOCATION FACTOR = 0AFF38 88888888
TEKSSST.CHG 12C. 1-26-78; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES

1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)

2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

00523 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SK503-20 11111. 0.715
2 SK503-19 10866. 0.713
3 SK503-18 10462. 0.657
4 SK503-17 10596. 0.706
5 SK503-16 12780. 0.717

STRAIN AT FRACTURE POINT IS NOT NORMAL
FRACTURE STRAINS * 0.702 0.025 A B C
FRACTURE STRESSES * 11163.120 938.060 5777.716 7967.149 9146.290
ORIGINAL CURVES TRUNCATED AT 0.047 STRAIN
BASE CURVE IS 5 OF CURVES USED.

NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0211 5004. 0.3370 0.3459
0.0218 5151. 0.3370 0.3716
0.0226 5283. 0.3370 0.3619
0.0233 5413. 0.3370 0.3496
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0327 6976. 0.3370 0.3581
0.0336 7107. 0.3370 0.3818
0.0345 7234. 0.3370 0.4066
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0345 7234. 0.3370 0.4066
0.0355 7381. 0.3370 0.4301
0.0367 7512. 0.3370 0.4252
0.0378 7635. 0.3370 0.4271
0.0389 7742. 0.3370 0.3924
0.0401 7839. 0.3370 0.3542

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

YIELD STRESS * 8158.849 81.823 7689.104 7880.078 7982.930
SECANT TO YIELD STRESS * 173701.078 163700. 167766. 169956.

PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.004 202967. 0.004 77228. 0.004 128347. 0.004 155878.
4 0.011 241214. 0.011 135464. 0.011 178456. 0.011 201611.
6 0.016 248855. 0.016 233822. 0.016 239934. 0.016 243226.
8 0.025 229220. 0.025 202423. 0.025 213317. 0.025 219184.

STRAIN AT 2ND PT ON BASE CURVE = 0.004
ELASTIC MODULUS AT 0.004 8006. 227854. 194970. 208339. 215539.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES = 227399.
WARNING-MAX SLOPE(E) = 302426. AT STRAIN = 0.011
AREA UNDER AVERAGE DESIGN CURVE = 6657.564

Figure H76. Computer Run SK503

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ex clst(stsstr) 'dl(swu50302) 1(tekast)'
**** LOAD MODULE RELOCATION FACTOR = 0B01E0 *****
TEKSST,CHG 12A,10-19-77; J.P.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
1
INPUT NUMBER TO BE DISCARDED & POSITION NUMBERS ONE AT A TIME
?
1
?
1
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.1 1000
TEST SPECIMENS-      END POINT STRESS      STRAIN
2  SWU503-2          11806.      0.443
3  SWU503-3          11593.      0.462
4  SWU503-4          11341.      0.441
5  SWU503-5          12237.      0.482
                        AVG      STD DEV
FRACTURE STRAINS      =      0.457      0.019      A      B      C
FRACTURE STRESSES     = 11744.377  379.423  9072.477 10165.217 10751.047
ORIGINAL CURVES TRUNCATED AT 0.054 STRAIN
BASE CURVE IS 4 OF CURVES USED.
NOT NORMAL  STRAIN  SSTRESS  DCRIT  DCAC
              0.0145  4776.   0.3810  0.4309
NOT NORMAL  STRAIN  SSTRESS  DCRIT  DCAC
              0.0145  4776.   0.3810  0.4309
              0.0148  4855.   0.3810  0.3901
NOT NORMAL  STRAIN  SSTRESS  DCRIT  DCAC
              0.0291  8048.   0.3810  0.3848
              0.0301  8190.   0.3810  0.4015
              0.0311  8312.   0.3810  0.3830
NOT NORMAL  STRAIN  SSTRESS  DCRIT  DCAC
              0.0311  8312.   0.3810  0.3830
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
                        AVG      STD DEV      A      B      C
YIELD STRESS          = 9637.004      73.328  9120.627  9331.812  9445.031
SECANT TO YIELD STRESS =177738.025      168215.  172110.  174198.
                        AVG      A      B      C
PC NO.  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC
2  0.000  343903.  0.000  119213.  0.000  211105.  0.000  260370.
4  0.007  355176.  0.007  280767.  0.007  311198.  0.007  327513.
6  0.015  332082.  0.015  284342.  0.015  303866.  0.015  314333.
8  0.019  318167.  0.019  284618.  0.019  298339.  0.019  305695.
STRAIN AT 2ND PT ON BASE CURVE= 0.000
                        STRAIN  STD DEV      AVG      A      B      C
ELASTIC MODULUS AT 0.000  19986.  394386.  153862.  252230.  304966.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 370954.
AREA UNDER AVERAGE DESIGN CURVE= 4668.477

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Figure H77. Computer Run SWU503

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ex clst(stsstr) 'd1(swu50301) g(e77623.40211.fag011) l(tekst) a(swu50301)'
TEXT LOAD MODULE RELUCATION FACTOR = 0AFF38 xxxxxxxx
TEKST,CHG 120, 1-26-78, J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.00692 1000
TEST SPECIMENS-    END POINT STRESS    STRAIN
1  SWU503-1        13754.    0.582
2  SWU503-2        13802.    0.593
3  SWU503-3        12259.    0.500
4  SWU503-4        14039.    0.621
5  SWU503-5        13014.    0.603
      AUG STD DEV      A      B      C
FRACTURE STRAINS    =    0.580    0.047    0.311    0.420    0.479
FRACTURE STRESSES   = 13373.600  731.827  9171.838 10880.062 11800.043
ORIGINAL CURVES TRUNCATED AT 0.055 STRAIN
BASE CURVE IS 4 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
      AUG STD DEV      A      B      C
YIELD STRESS        = 10296.317  260.825  8798.920  9407.686  9735.543
SECANT TO YIELD STRESS =187566.276      160288.    171378.    177351.
      AUG      B      C
PC NO.  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC
2  0.013 220426.  0.013 -8562.  0.013 84533.  0.013 134670.
4  0.029 252934.  0.029 118854.  0.029 173364.  0.029 202721.
6  0.045 219344.  0.045 158486.  0.045 183228.  0.045 196553.
8  0.051 201792.  0.051 168840.  0.051 182237.  0.051 189452.
STRAIN AT 2ND PT ON BASE CURVE= 0.013
      STRAIN STD DEV      AUG      A      B      C
ELASTIC MODULUS AT 0.013  26082.  277244.  134787.  192703.  223894.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 276962.
WARNING-MAX SLOPE(E)= 299795. AT STRAIN= 0.020
AREA UNDER AVERAGE DESIGN CURVE= 6553.526

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Figure H78. Computer Run SWU503

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ex clst(stsstr) 'd1(swu50306) q(a77623.d0211.feg013) l(takst) a(swu50306)'
xxxx LOAD MODULE RELOCATION FACTOR = 000F38 xxxxxxxx
TEKST,CHG 12C, 1-26-78; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)
?
1
INPUT NUMBER TO BE DISCARDED & POSITION NUMBERS ONE AT A TIME
?
1
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.00523 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SWU503-6 14065. 0.522
3 SWU503-8 17457. 0.464
4 SWU503-9 14083. 0.536
AUG STD DEV A B C
FRACTURE STRAINS = 0.507 0.038 0.104 0.272 0.362
FRACTURE STRESSES = 15201.667 1953.197 -5410.424 3179.738 7767.798
ORIGINAL CURVES TRUNCATED AT 0.100 STRAIN
BASE CURVE IS 2 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AUG STD DEV A B C
YIELD STRESS = 12076.177 1582.050 -4619.202 2338.656 6054.892
SECANT TO YIELD STRESS = 111251.830 -42554. 21545. 55781.
AUG B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.010 166352. 0.010 50315. 0.010 98674. 0.010 124502.
4 0.032 158796. 0.032 13705. 0.032 74172. 0.032 106468.
6 0.055 152849. 0.055 40279. 0.055 87193. 0.055 112250.
8 0.077 141370. 0.077 43158. 0.077 84088. 0.077 105949.
STRAIN AT 2ND PT ON BASE CURVE = 0.010
STRAIN STD DEV AUG A B C
ELASTIC MODULUS AT 0.010 23072. 161329. -54372. 35523. 83536.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES = 161335.
WARNING-MAX SLOPE(E) = 161436. AT STRAIN = 0.011
AREA UNDER AVERAGE DESIGN CURVE = 6256.610
```

Figure H79. Computer Run SWU503

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```

ex clst(stsstr) 'd1(swu50311) l(teksst)'
**** LOAD MODULE RELOCATION FACTOR = 0801E0 ****
TEKSST,CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
  ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
  TEST SPECIMENS-  END POINT STRESS  STRAIN
    1 SWU503 -11      9534.    0.665✓
    2 SWU503 -12     10294.    0.690✓
    3 SWU503 -13     10834.    0.715✓
    4 SWU503-1-14    11550.    0.677✓
    5 SWU503 -15     10974.    0.699✓
      AVG  STD DEV      A      B      C
  FRACTURE STRAINS  =    0.689    0.019    0.578    0.623    0.648
  FRACTURE STRESSES = 10637.200  761.611  6264.793  8042.392  8999.737
ORIGINAL CURVES TRUNCATED AT 0.126 STRAIN
BASE CURVE IS 2 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
      AVG  STD DEV      A      B      C
  YIELD STRESS      =  7815.291  160.942  6891.322  7266.961  7469.266
  SECANT TO YIELD STRESS = 62260.835      54900.    57893.    59504.
      AVG      A      B      C
  PC NO.  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC
    2  0.029  70605.  0.029  22377.  0.029  41984.  0.029  52544.
    4  0.079  72628.  0.079  45485.  0.079  56520.  0.079  62463.
    6  0.106  69794.  0.106  51617.  0.106  59007.  0.106  62987.
    8  0.126  52261.  0.126  54900.  0.126  57893.  0.126  59504.
  STRAIN AT 2ND PT ON BASE CURVE= 0.029
      STRAIN  STD DEV      AVG      A      B      C
  ELASTIC MODULUS AT 0.029  4861.  71161.  46322.  56421.  61859.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES=  71283.
WARNING-MAX SLOPE(E)=  76431. AT STRAIN= 0.055
AREA UNDER AVERAGE DESIGN CURVE=  5752.630

```

Figure H80. Computer Run SWU503

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```

ex clst(stsstr) 'd4(tex5037x) 1(tekst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF4EO *****
TEKSST,CHG 12A,40-40-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
4
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,40 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.04 1000
TEST SPECIMENS-   END POINT STRESS   STRAIN
  1  TEX503-7X           43354.    0.527
  2  TEX503-8X           44523.    0.439
  3  TEX503-9X           44289.    0.475
  4  TEX503-40X          42655.    0.482
                                AVG   STD DEV
FRACTURE STRAINS           =    0.484    0.036
FRACTURE STRESSES           = 12205.433  970.774
ORIGINAL CURVES TRUNCATED AT 0.053 STRAIN
BASE CURVE IS 4 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
                                AVG   STD DEV
YIELD STRESS               = 9796.798    65.623
SECANT TO YIELD STRESS      = 483735.844  475069.
                                A       B       C
% C NO.  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC
  2  0.004  346239.  0.004  260199.  0.004  295387.  0.004  344252.
  4  0.044  336449.  0.044  293455.  0.044  340916.  0.044  320277.
  6  0.049  341355.  0.049  273003.  0.019  288688.  0.049  297097.
  8  0.034  270145.  0.034  250749.  0.034  258660.  0.034  262945.
STRAIN AT 2ND PT ON BASE CURVE= 0.000
                                AVG   A       B       C
ELASTIC MODULUS AT 0.000    44830.  355054.  173279.  247620.  297475.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 349431.
AREA UNDER AVERAGE DESIGN CURVE= 5059.440

```

Figure H81. Computer Run TEX503X

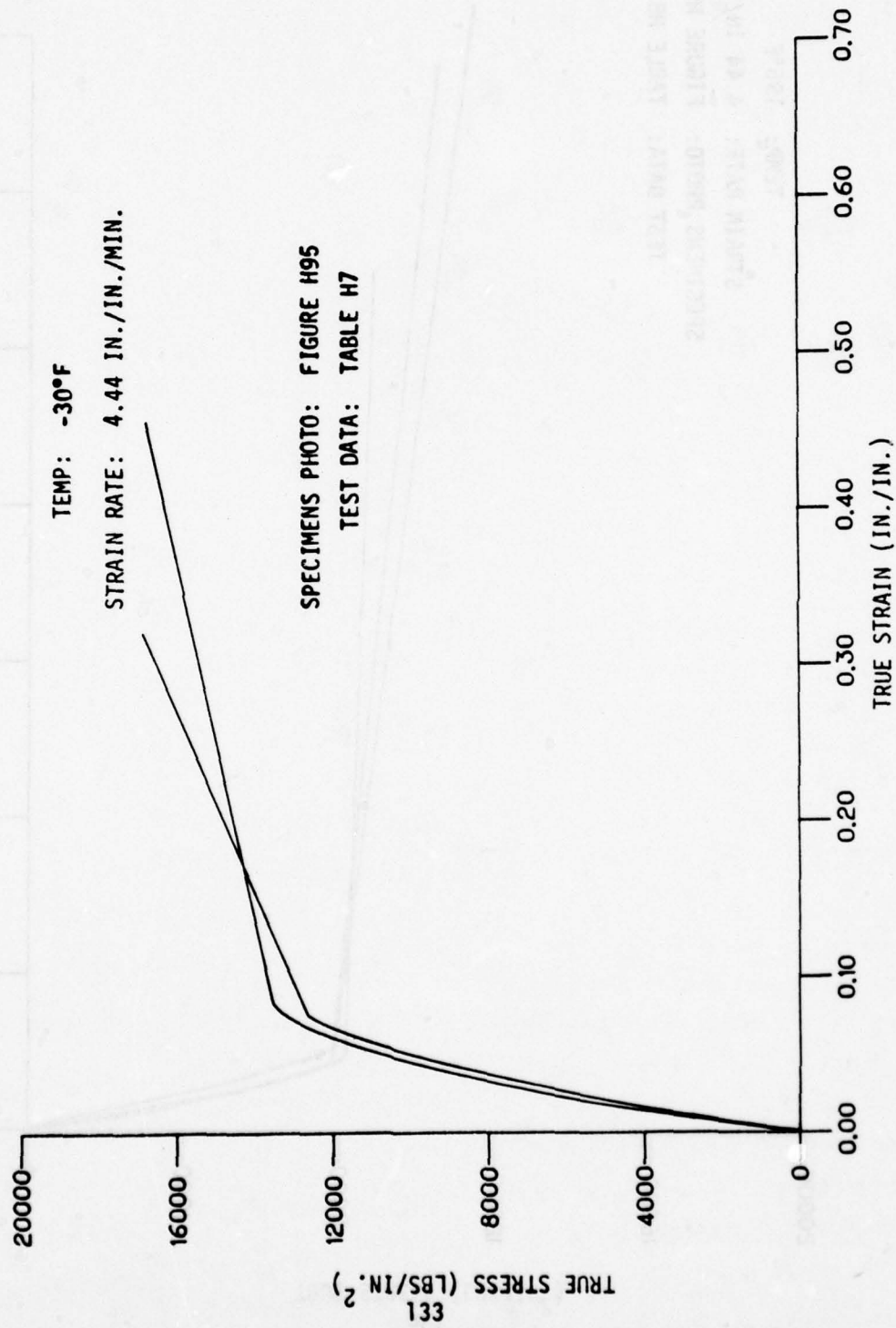


Figure H82. Tensile Test Curves (SK605 - 0.50 Polycarbonate)

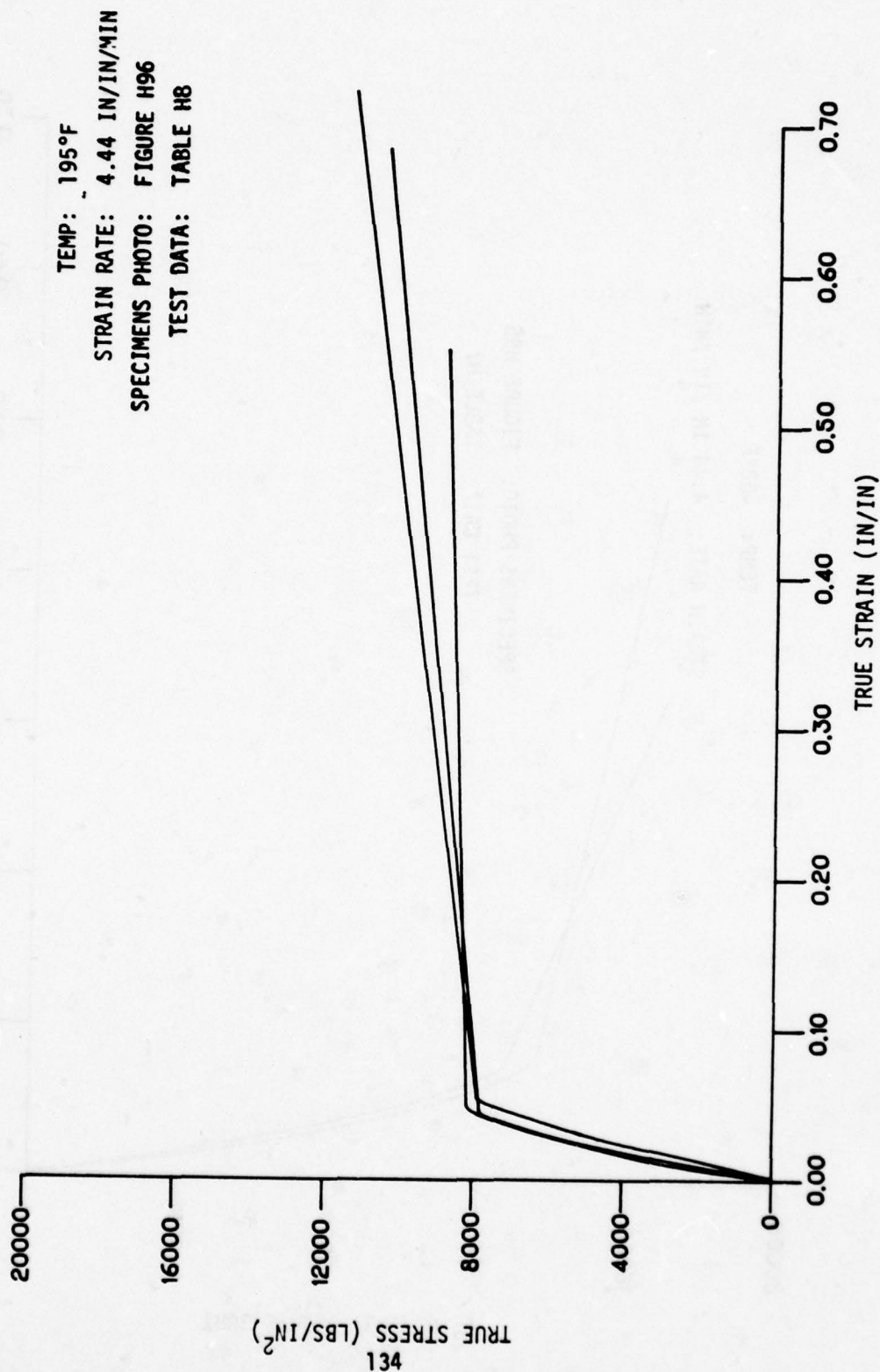


Figure H83. Tensile Test Curves (SK605 - 0.50 Polycarbonate)

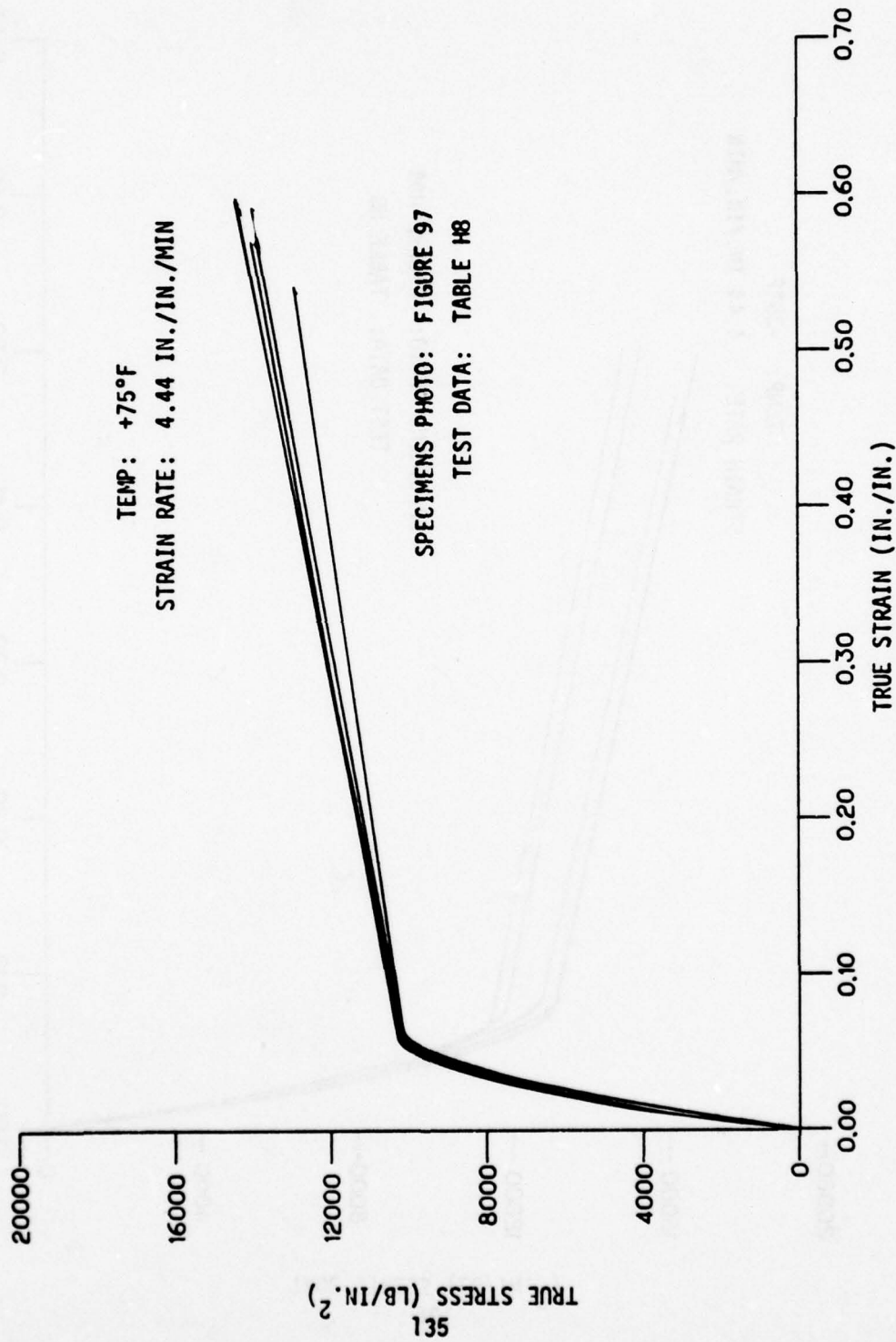


Figure H84. Tensile Test Curves (SMU605 - 0.50 Polycarbonate).

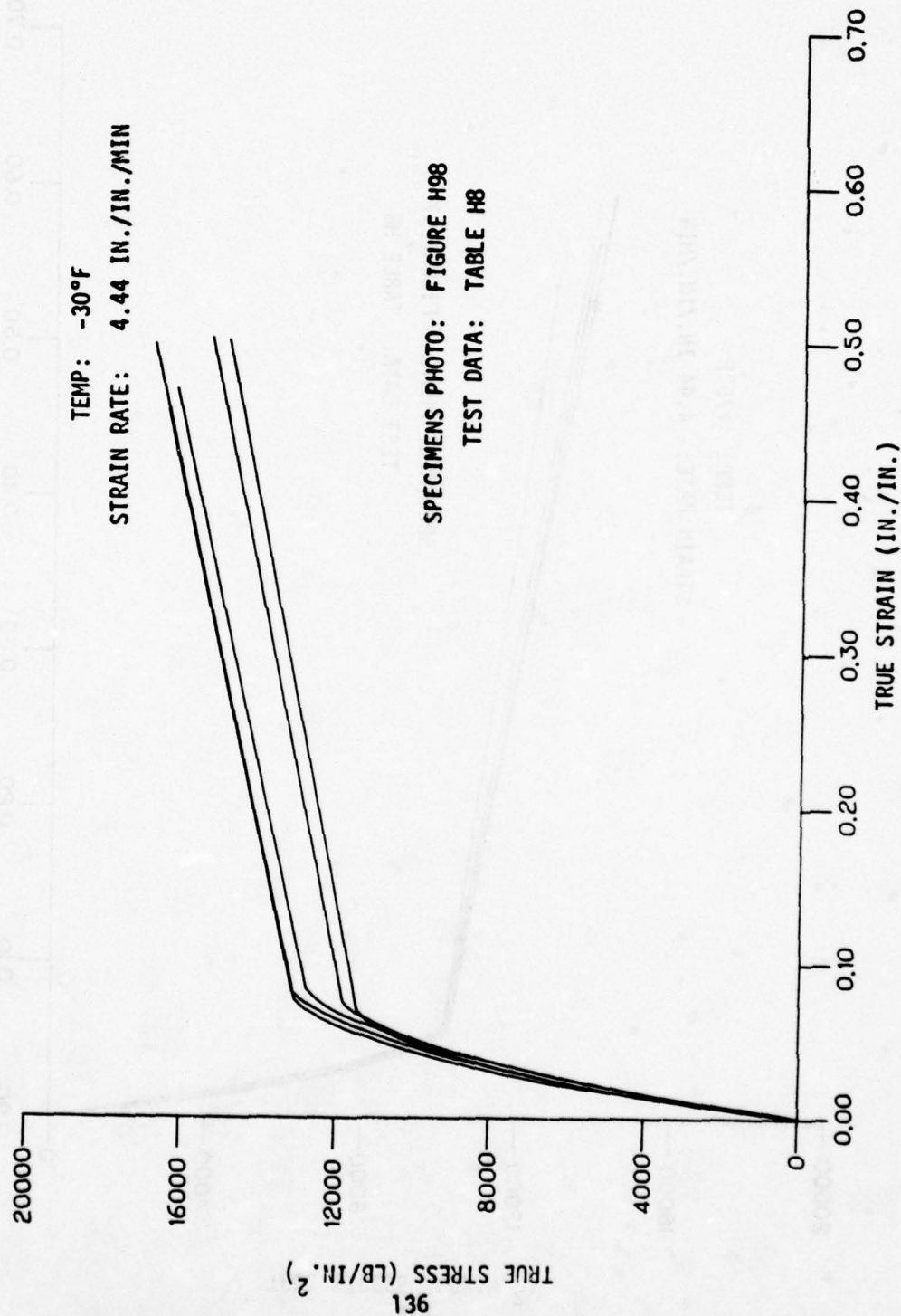


Figure H85. Tensile Test Curves (SWU605 - 0.50 Polycarbonate).

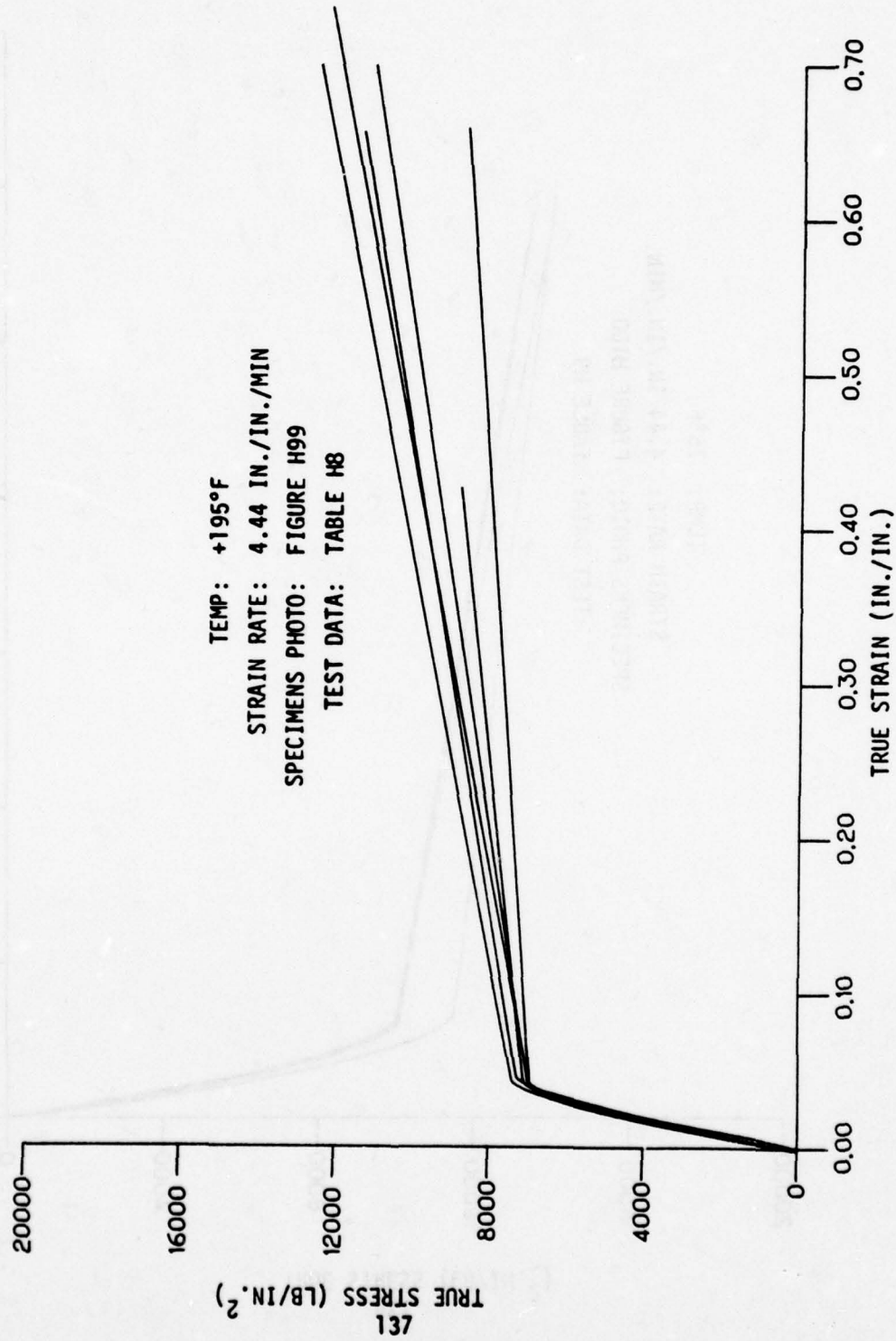


Figure H86. Average Test Curves (SMU605 - 0.50 Polycarbonate).

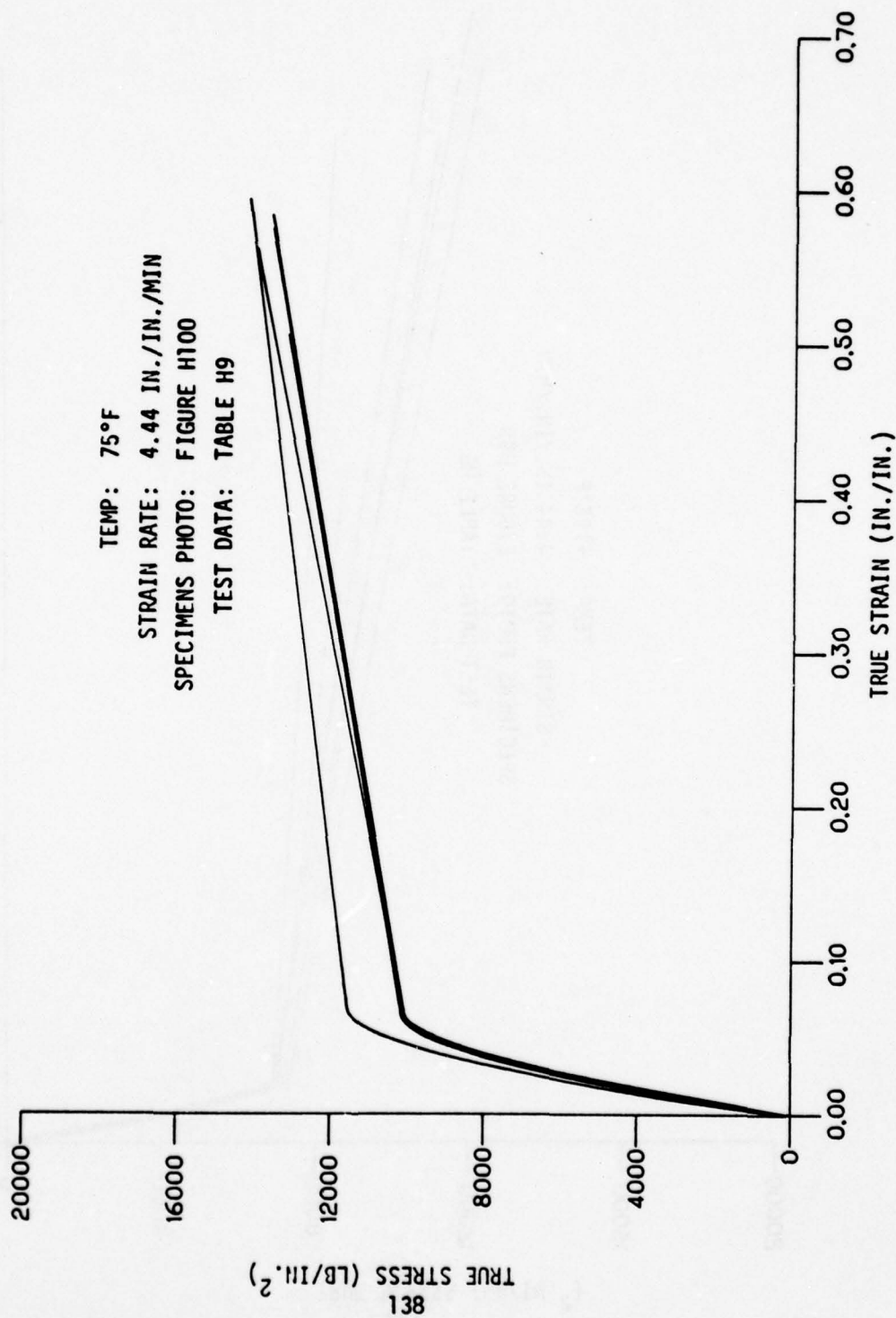


Figure H87. Tensile Test Curves (SWU605RH - 0.50 Polycarbonate).

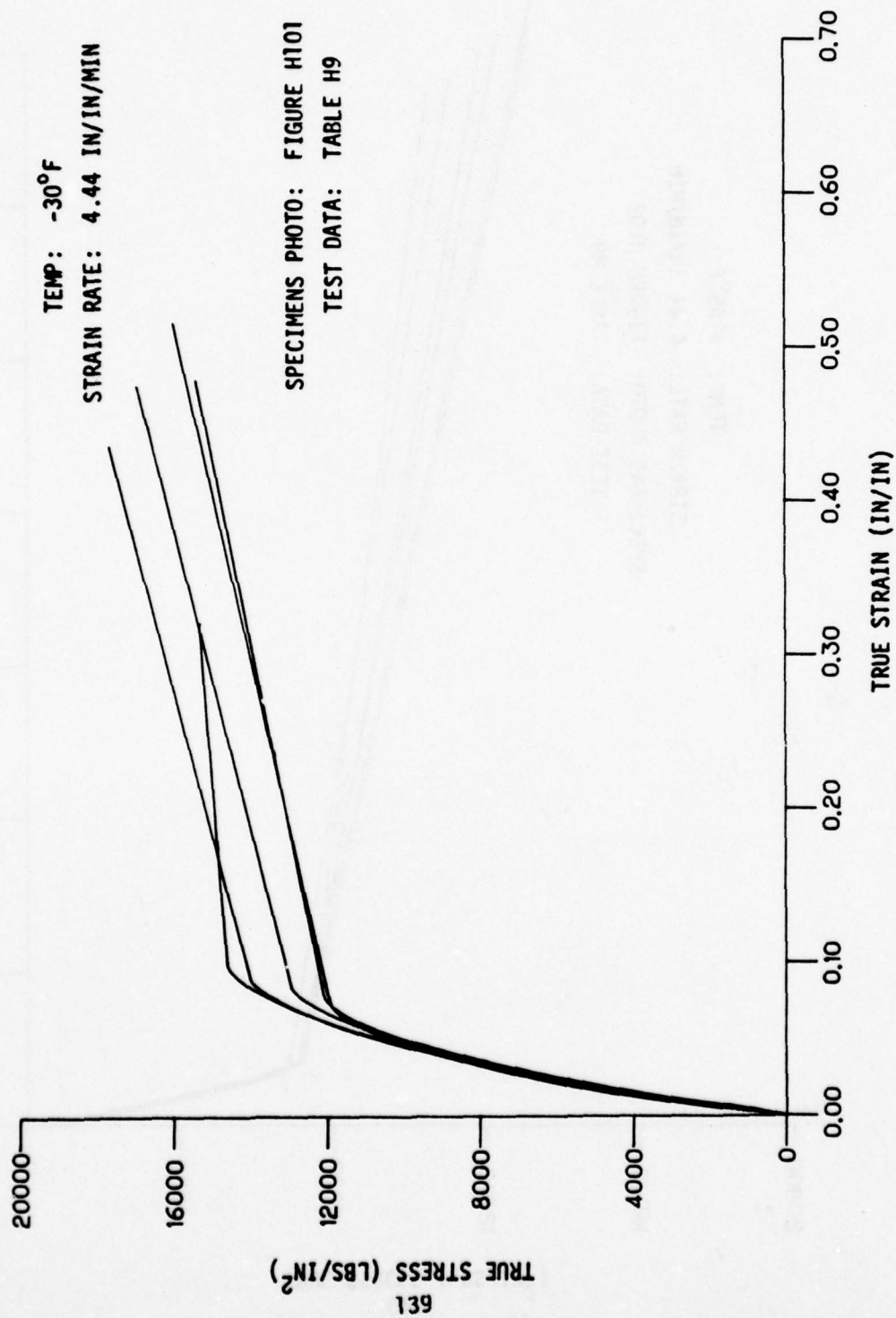


Figure H88. Tensile Test Curves (SWU605RH - 0.50 Polycarbonate)

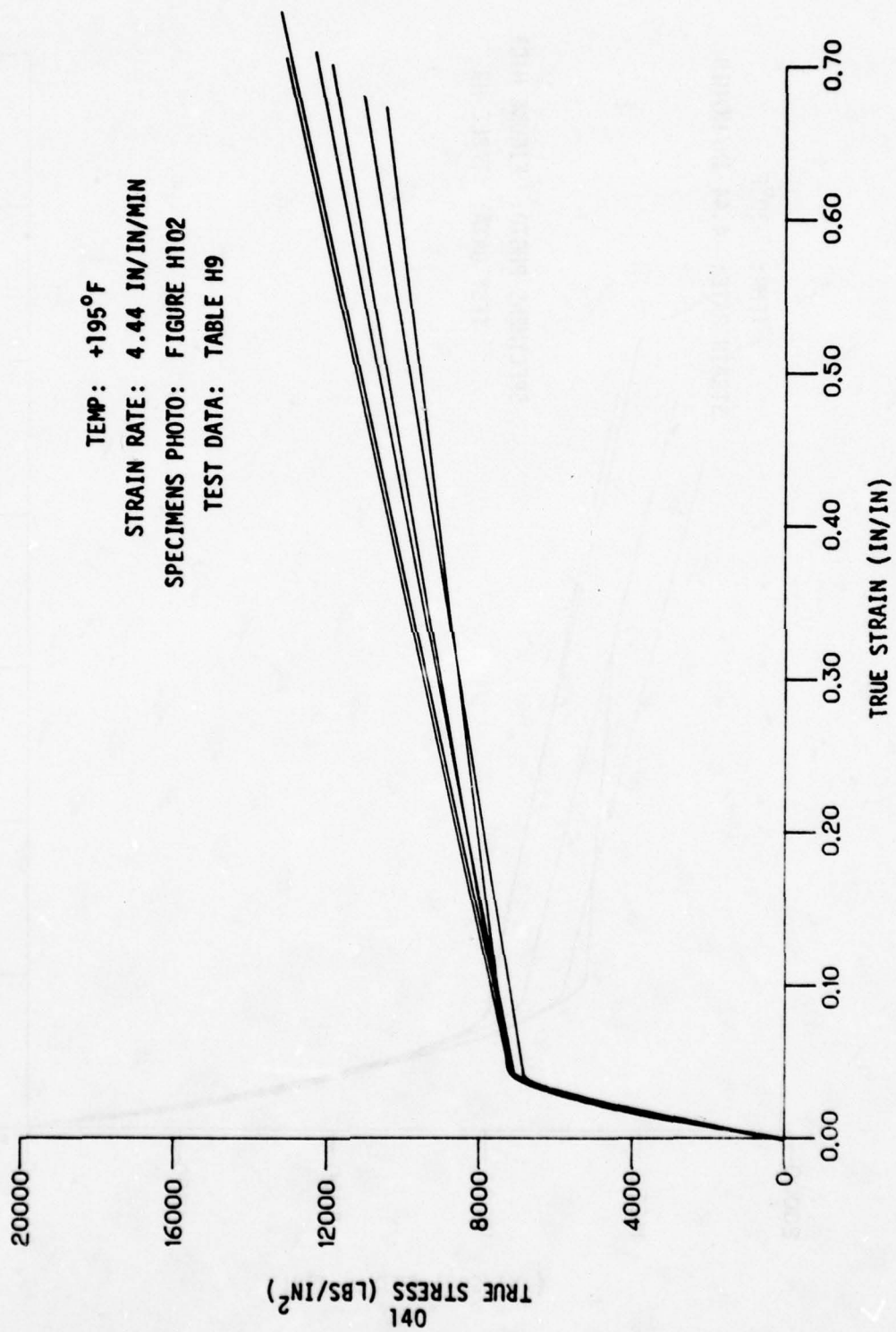


Figure H89. Tensile Test Curves (SMU605RH - 0.50 Polycarbonate)

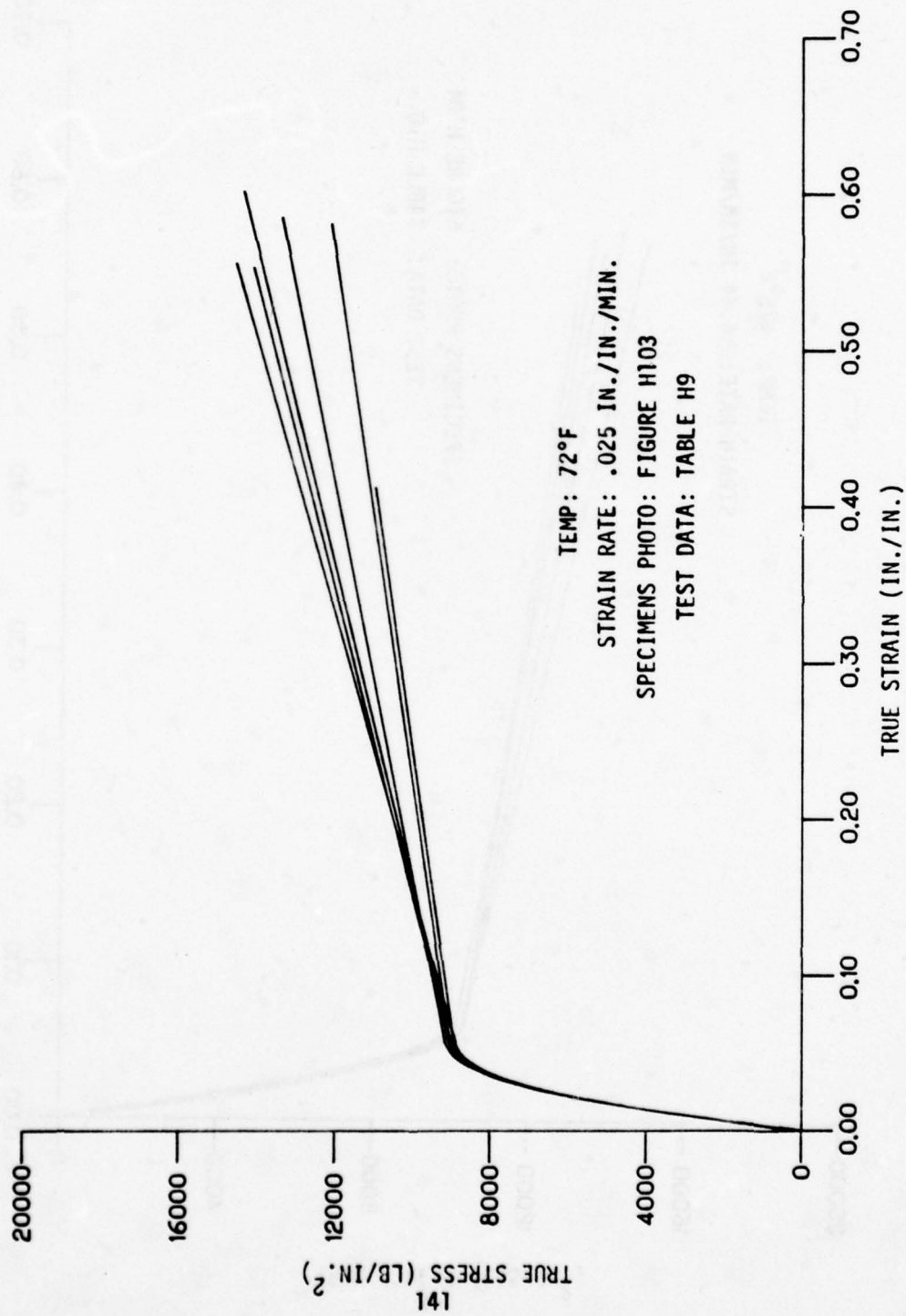


Figure H90. Tensile Test Curves (TEX571RH-0.50 Polycarbonate)

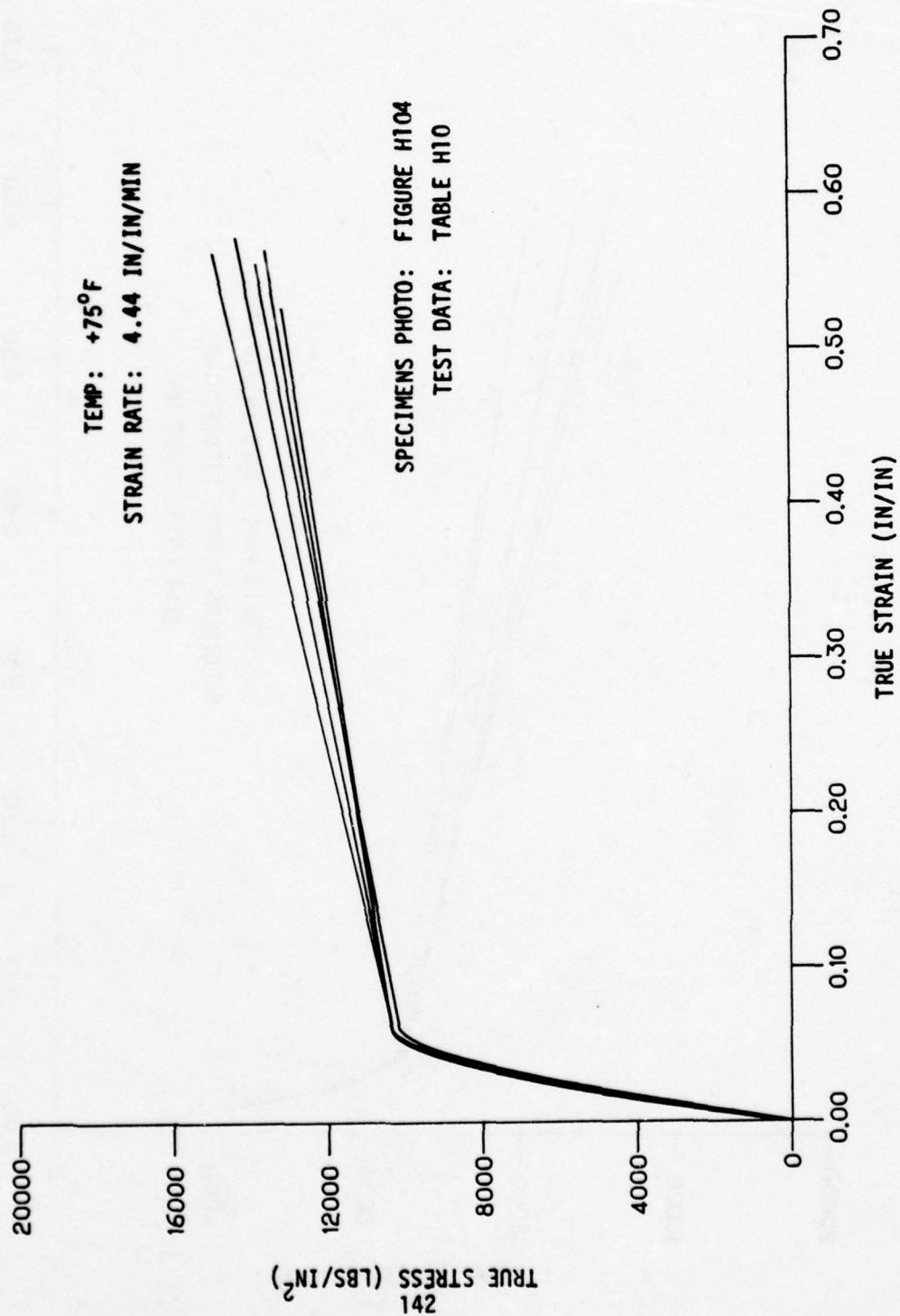


Figure H91 Tensile Test Curves (TEX605 - 0.50 Polycarbonate)

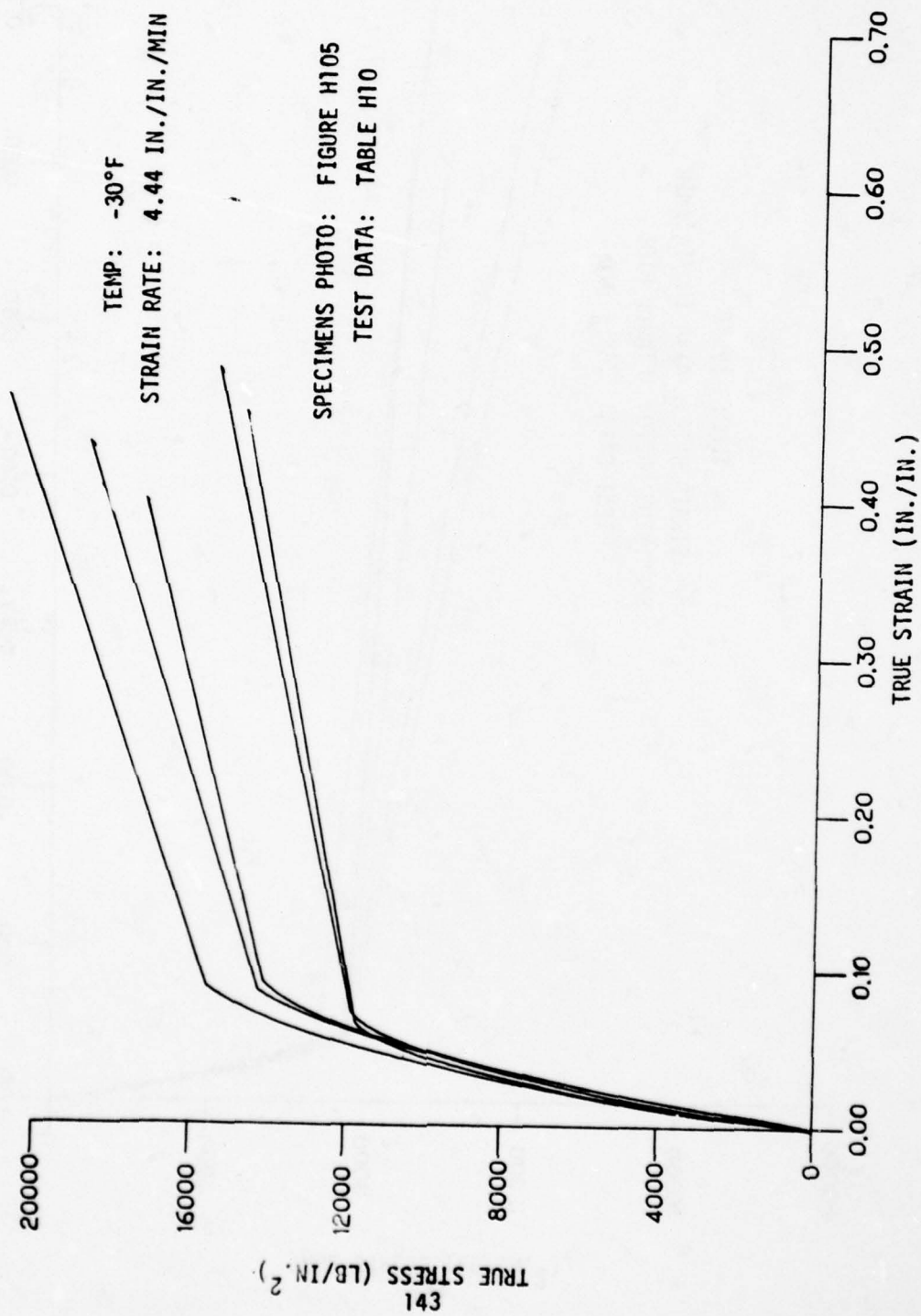


Figure H92. Tensile Test Curves (TEX605 - 0.50 Polycarbonate).

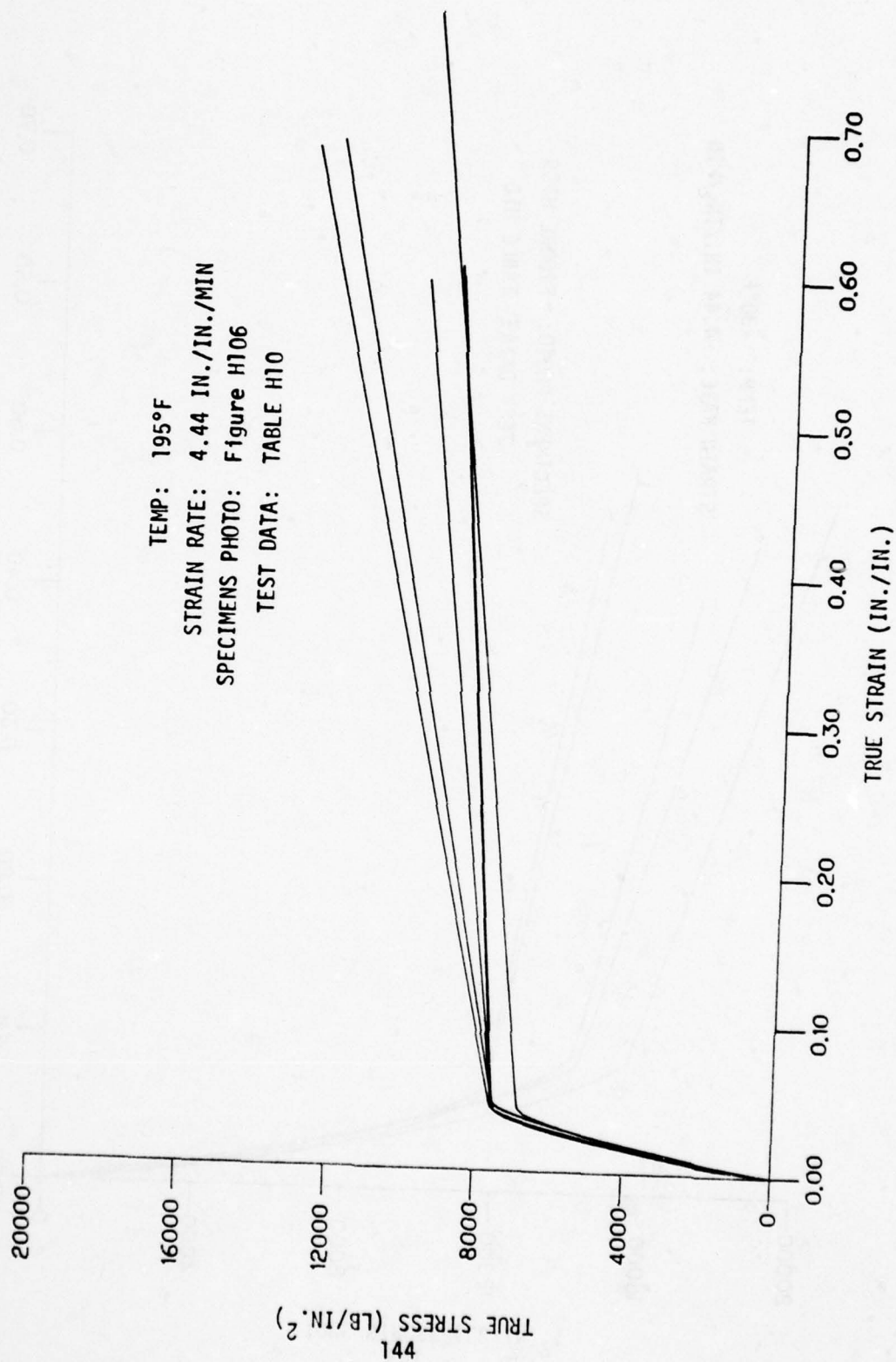


Figure H93. Tensile Test Curves (TEX605 - 0.50 Polycarbonate).

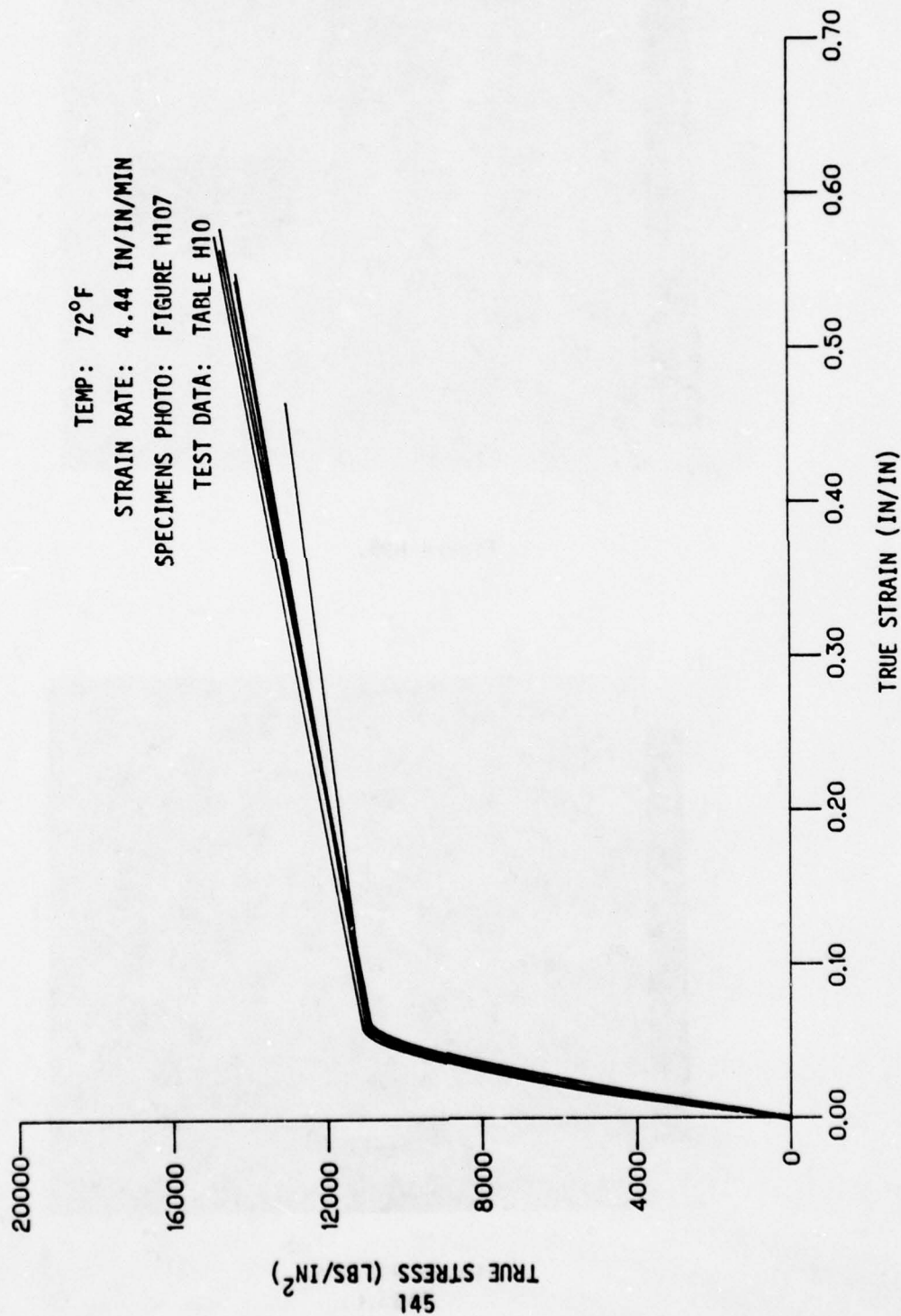


Figure H94. Tensile Test Curves (TEX605X - 0.50 Polycarbonate)

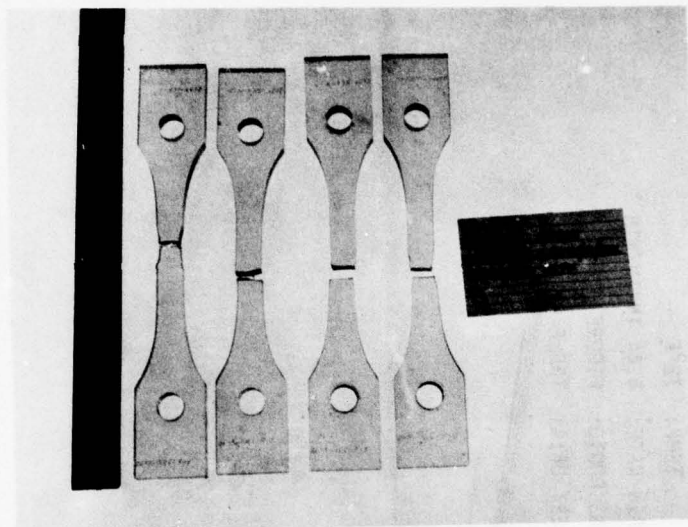


Figure H95.

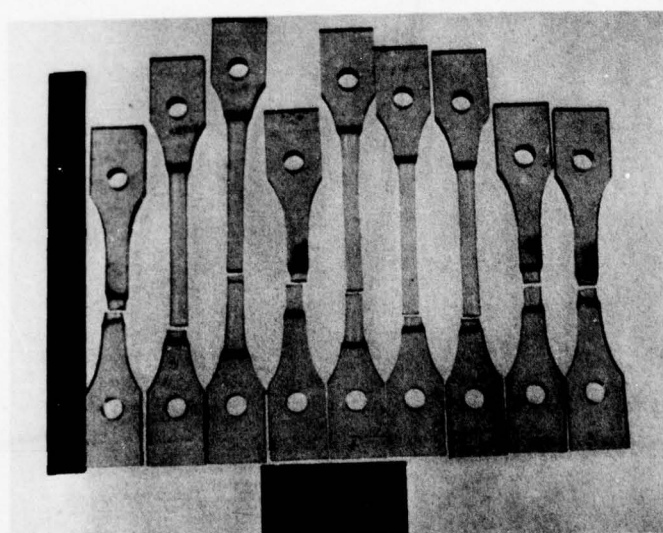


Figure H96.
146

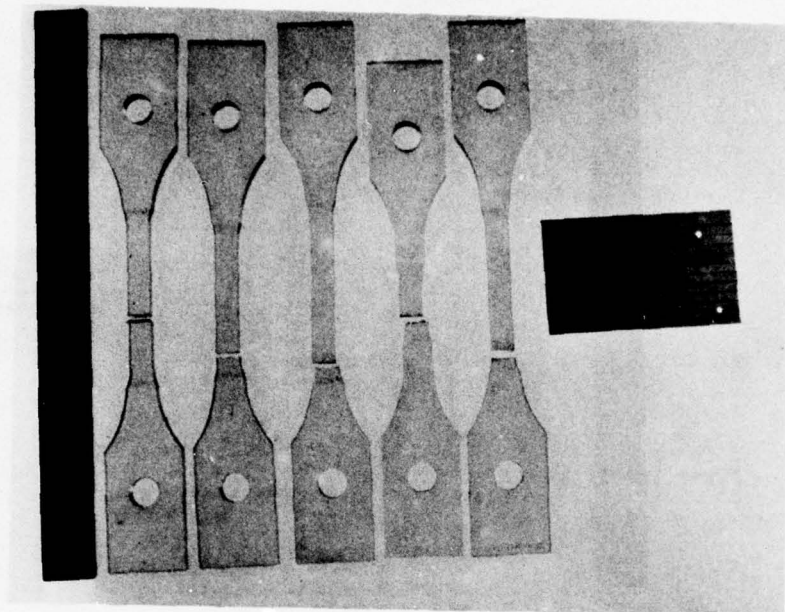


Figure H97.

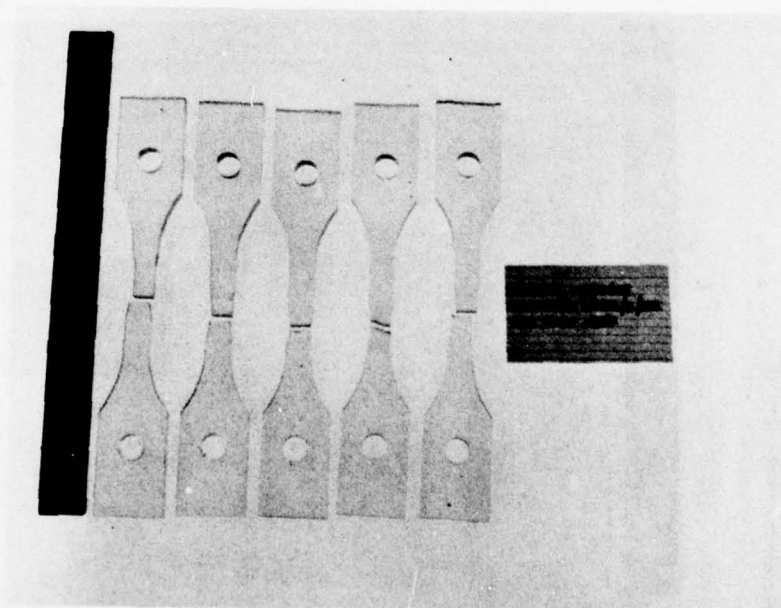


Figure H98.
147

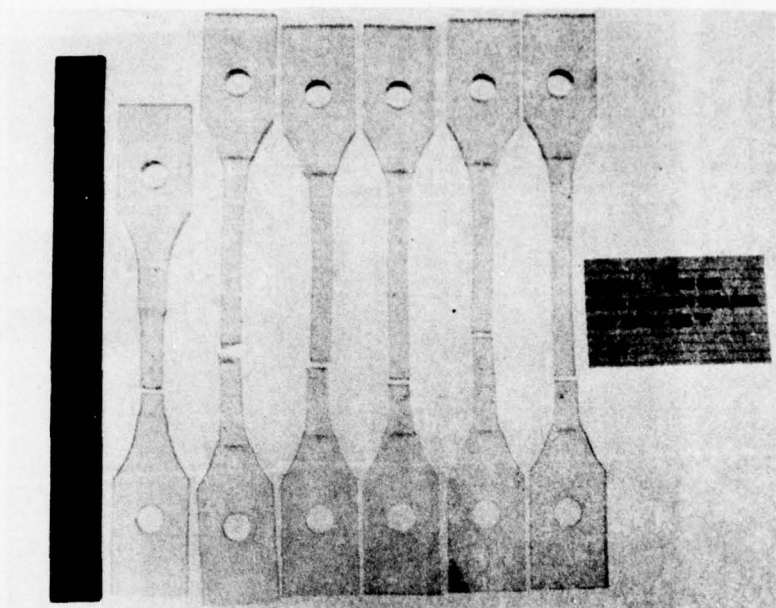


Figure H99.

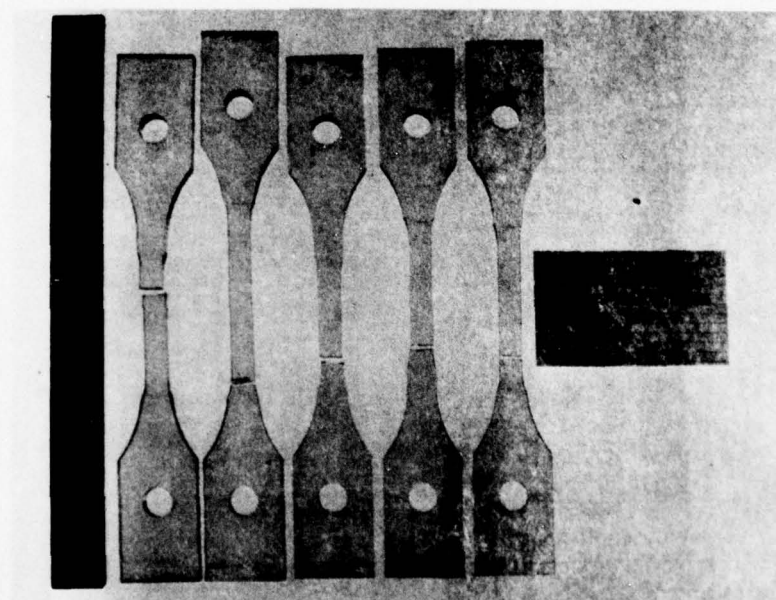


Figure H100.
148

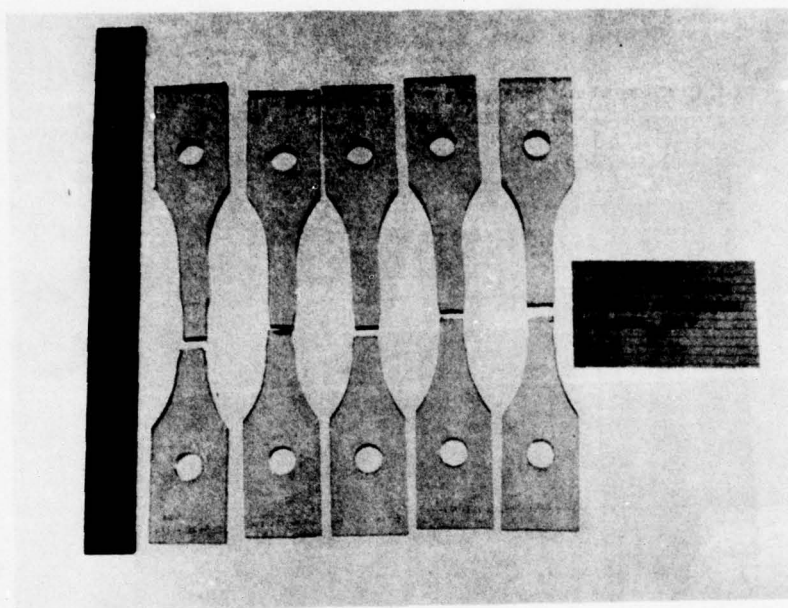


Figure H101.

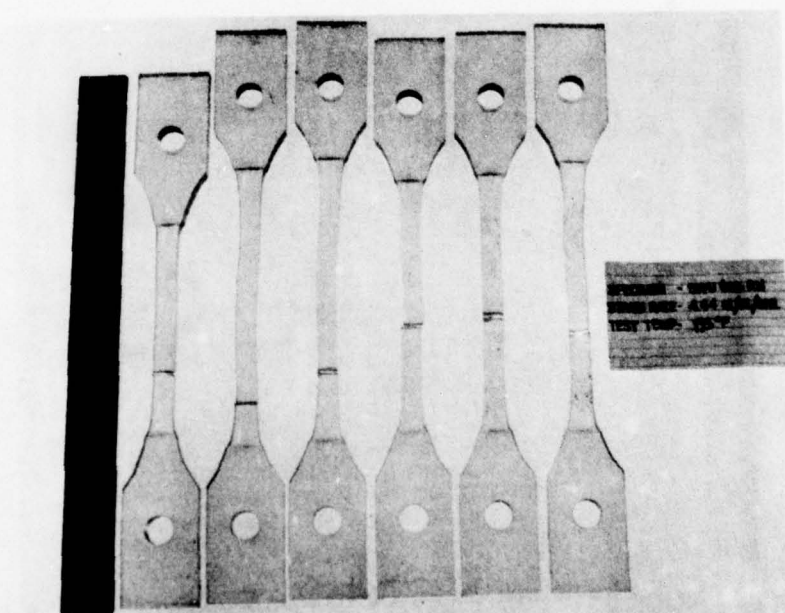


Figure H102.
149

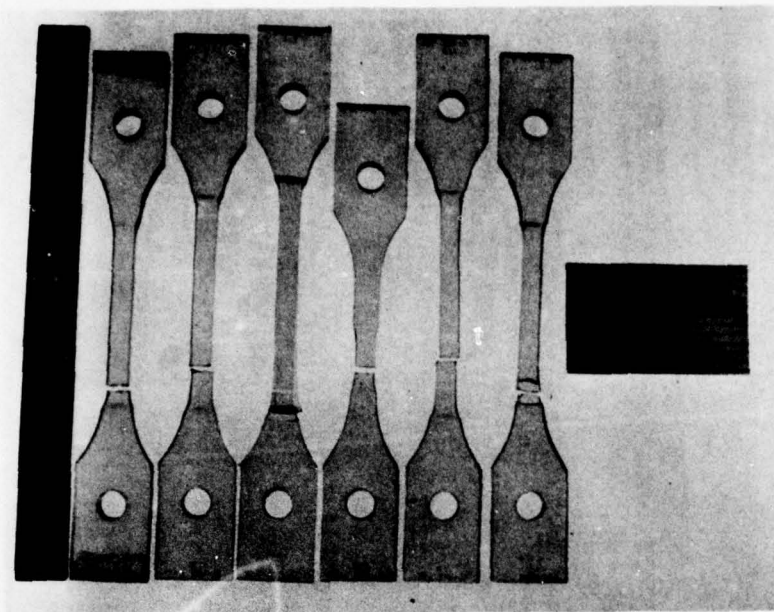


Figure H103.

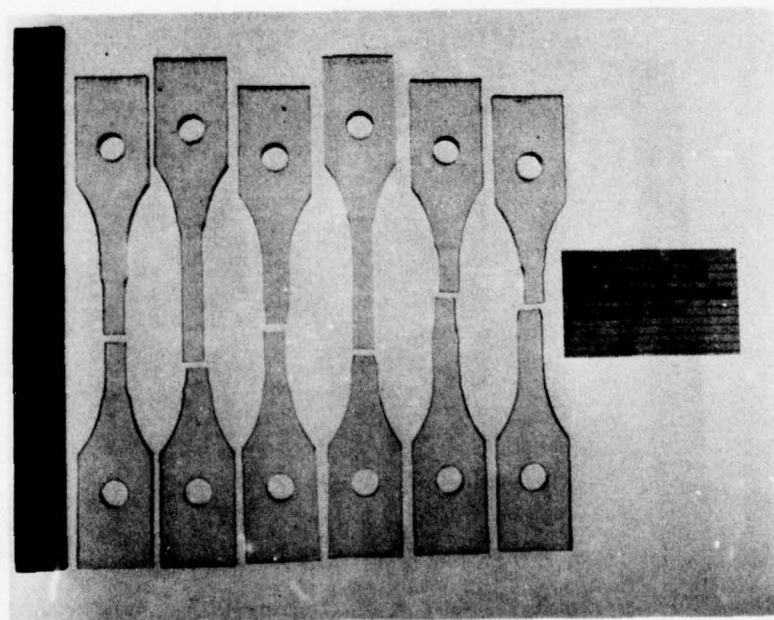


Figure H104.
150

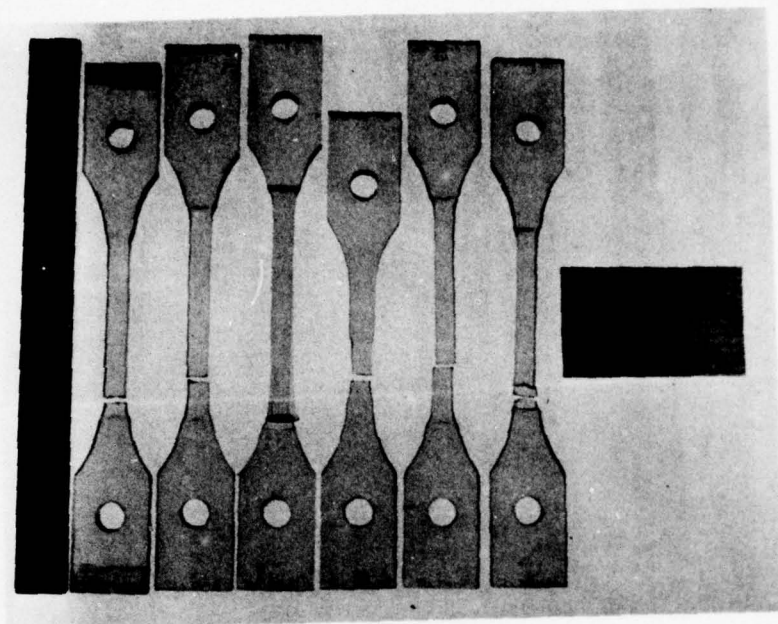


Figure H103.

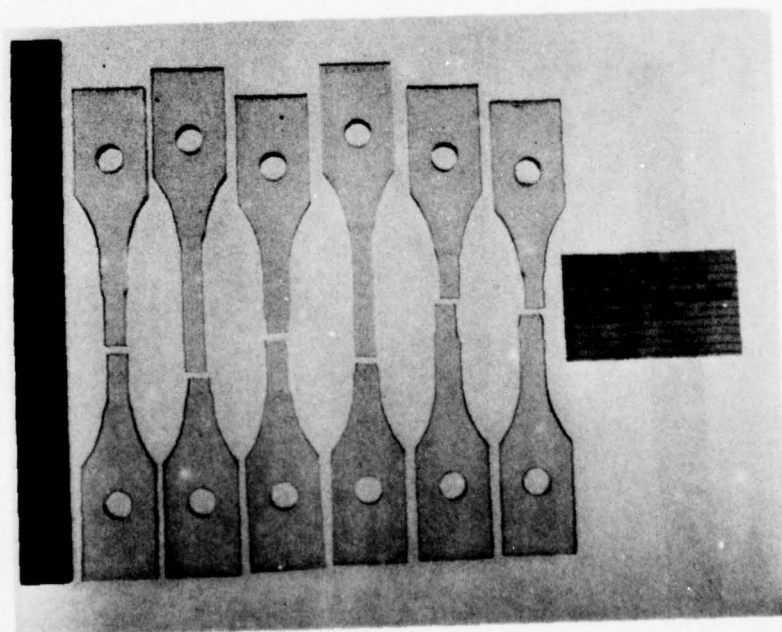


Figure H104.
150

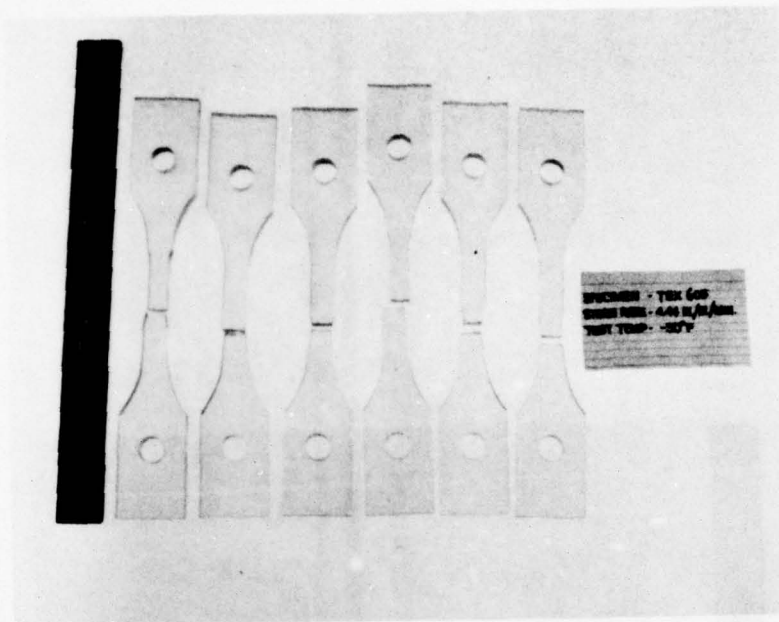


Figure H105.

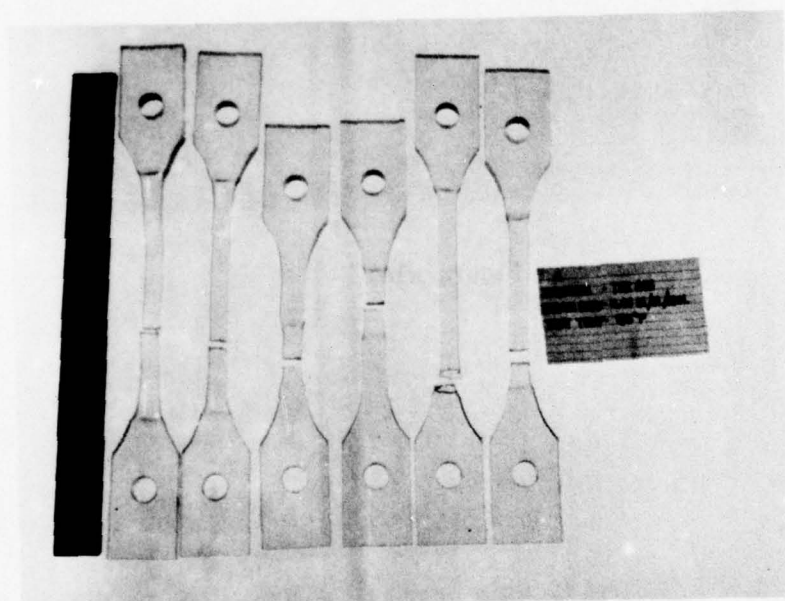


Figure H106.

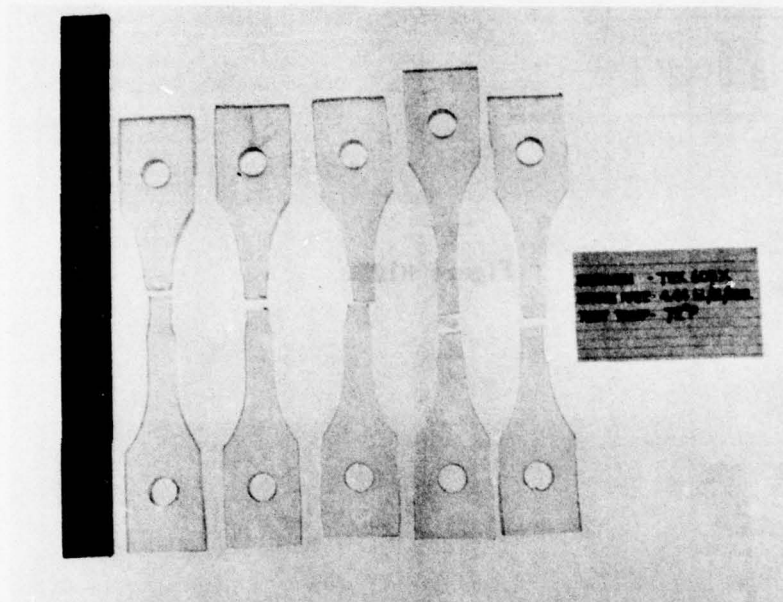


Figure H107.

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```

* d1(stst) d1(sk60503) g(e77623.d0211.fog009) ((test) a(sk60503)
*** LOAD MODULE RELOCATION FACTOR = 0AFF30 *****
TEST, CHG 12C, 1-26-78, J.F. BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
1) YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
  (1=YES, 2=NO)
2
2
1-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
3
.00388 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SK605-3 16826. 0.321
2 SK605-4 16720. 0.456
      AUG STD DEV
FRACTURE STRAINS - 0.388 0.095 -3.152 -1.576 -0.734
FRACTURE STRESSES - 16773.002 74.065 13902.605 15230.345 15891.302
ORIGINAL CURVES TRUNCATED AT 0.004 STRAIN
BASE CURVE IS 2 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
      AUG STD DEV
YIELD STRESS - 13147.507 530.320 -6524.185 2232.900 6900.352
SECANT TO YIELD STRESS -156429.700 -77625. 26568. 82208.
      AUG
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.019 257429. 0.019-653371. 0.019-247913. 0.019 -31398.
4 0.029 236570. 0.029-484053. 0.029-163256. 0.029 8051.
6 0.050 206461. 0.050-169422. 0.050 -2091. 0.050 87264.
8 0.069 180480. 0.069 -45924. 0.069 54863. 0.069 108684.
STRAIN AT 2ND PT ON BASE CURVE= 0.009
      STRAIN STD DEV AUG
ELASTIC MODULUS AT 0.009 21307. 265062. -528359. -175159. 13461.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 265111.
AREA UNDER AVERAGE DESIGN CURVE= 5256.127

```

Figure H108. Computer Run SK605

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```
copy burr.data 'tsol2jc.green.data(sk60510)'
READY
ex clst(istr) 'd1(sk60510) g(a77623.d02(1.fog010)) ((test) a(sk60510))'
11111 LOAD MODULE RELOCATION FACTOR = 0AFF38 1111111111
TEKST,CHG 120, 1-26-78; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.00322 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SK605-15 11322. 0.721
2 SK605-13 10404. 0.683
3 SK605-10 8783. 0.550
AUG STD DEV A B C
FRACTURE STRAINS = 0.651 0.090 -0.296 0.099 0.310
FRACTURE STRESSES = 10169.667 1285.618 -3397.463 2256.686 5276.604
ORIGINAL CURVES TRUNCATED AT 0.054 STRAIN
BASE CURVE IS 1 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AUG STD DEV A B C
YIELD STRESS = 7961.253 173.009 6134.646 6895.891 7302.477
SECANT TO YIELD STRESS -147425.581 113601. 127697. 135226.
AUG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.017 202920. 0.017-239081. 0.017 -54875. 0.017 43510.
4 0.033 187413. 0.033 -22829. 0.033 64790. 0.033 111588.
6 0.048 161914. 0.048 76909. 0.048 112335. 0.048 131256.
8 0.651 15614. -0.296 11469. 0.099 22870. 0.310 17044.
STRAIN AT 2ND PT ON BASE CURVE = 0.009
STRAIN STD DEV AUG A B C
ELASTIC MODULUS AT 0.009 37703. 212020. -161907. -6072. 77161.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES = 211688.
AREA UNDER AVERAGE DESIGN CURVE = 5676.461
```

Figure H109. Computer Run SK605

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----- LOAD MODULE RELOCATION FACTOR = 0.000000 -----

TEKST.CHG 12C. 1-26-78: J.P.BURKE X37544

THIS PROGRAM IS FOR TENSION TEST CURVES ONLY

ENTER NUMBER OF DATA FILES

?

1

DO YOU WANT TO DISCARD ANY TEST SPECIMENS.10 MAX
(1=YES,2=NO)

?

2

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

?

.CC388 1000

TEST SPECIMENS- END POINT STRESS STRAIN

1	SWU605-6	14351.	0.598
2	SWU605-7	14001.	0.577
3	SWU605-8	14364.	0.596
4	SWU605-9	12870.	0.541
5	SWU605-10	13919.	0.586

	AVG	STD DEV	A	B	C
FRACTURE STRAINS	= 0.580	0.023	0.447	0.501	0.530

FRACTURE STRESSES	= 13901.000	610.359	10396.927	11821.506	12588.727
-------------------	-------------	---------	-----------	-----------	-----------

ORIGINAL CURVES TRUNCATED AT 0.064 STRAIN

BASE CURVE IS 4 OF CURVES USED.

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
0.0091	2851.	0.3370	0.3555	
0.0102	3162.	0.3370	0.3550	

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

	AVG	STD DEV	A	B	C
YIELD STRESS	= 10221.003	73.612	9798.395	9970.706	10062.737
SECANT TO YIELD STRESS	= 160428.175		153795.	156492.	157944.

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.012	277487.	0.012	80170.	0.012	160389.	0.012	203592.
4	0.026	242881.	0.026	160778.	0.026	194157.	0.026	212133.
6	0.039	213442.	0.039	171912.	0.039	188796.	0.039	197889.
8	0.052	186332.	0.052	165697.	0.052	174086.	0.052	178604.

STRAIN AT 2ND PT ON BASE CURVE= 0.006

	STRAIN	STD DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.006	42910.	288440.	44276.	143541.	197001.	

CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 287234.

AREA UND AVERAGE DESIGN CURVE= 6643.292

Figure H110. Computer Run SWU605

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THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES

?

1

DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)

?

2

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

?

.00388 1000

TEST SPECIMENS-	END POINT STRESS	STRAIN
1 SWU605-1	14844.	0.501
2 SWU605-2	16758.	0.498
3 SWU605-3	16411.	0.456
4 SWU605-4	15278.	0.502
5 SWU605-5	16181.	0.469

	AVG	STD DEV	A	B	C
FRACTURE STRAINS	= 0.485	0.021	0.363	0.413	0.439
FRACTURE STRESSES	= 15894.399	802.824	11285.388	13159.178	14168.328

ORIGINAL CURVES TRUNCATED AT 0.083 STRAIN

BASE CURVE IS 5 OF CURVES USED.

NOT NORMAL	STRAIN	SSTRESS	DCFIT	DCAC
0.0119	3503.	0.3370	0.3404	
0.0119	3503.	0.3370	0.3404	
0.0120	3783.	0.3370	0.3437	
0.0130	4061.	0.3370	0.3502	
0.0140	4331.	0.3370	0.3531	
0.0160	4583.	0.3370	0.3606	

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

	AVG	STD DEV	A	B	C
YIELD STRESS	= 12483.922	735.413	8261.916	9978.370	10902.784
SECANT TO YIELD STRESS	= 149686.270		99063.	119644.	130728.

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.006	277294.	0.006	124720.	0.006	186749.	0.006	220155.
4	0.018	269815.	0.018	159804.	0.018	204529.	0.018	228616.
6	0.033	236128.	0.033	159122.	0.033	190420.	0.033	207289.
8	0.053	200636.	0.053	153422.	0.053	172617.	0.053	182954.

STRAIN A 2ND PT ON BASE CURVE= 0.006

	STRAIN	STD DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.006	26916.		208756.	270113.	253500.	267206.

CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 290370.

WARNING-*** SLOPE(F)= 291097. AT STRAIN= 0.007

AREA UNDER AVERAGE DESIGN CURVE= 6387.976

Figure H111. Computer Run SWU605

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ex clst(stsstr) 'dl(swu60511) q(e77623.d0211.feq023) l(teksst) a(swu60511)'
**** LOAD MODULE RELOCATION FACTOR = 0AFF38 *****
TEKSST,CHG 12C, 1-26-78: J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
11
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GEPBER DIGITISED DATA
?
.00388 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SWU605-11 8671. 0.658
2 SWU605-12 12220. 0.735
3 SWU605-13 11080. 0.698
4 SWU605-14 11370. 0.655
5 SWU605-15 8797. 0.426
6 SWU605-16 12488. 0.698
STRAIN AT FRACTURE POINT IS NOT NORMAL
FRACTURE STRAINS = 0.645 AVG STD DEV A B C
FRACTURE STRESSES = 10771.000 1661.845 2358.739 5775.493 7621.803
ORIGINAL CURVES TRUNCATED AT 0.046 STRAIN
BASE CURVE IS 4 OF CURVES USED.
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0040 1171. 0.3190 0.3347
0.0053 1469. 0.3190 0.3550
0.0065 1745. 0.3190 0.3529
0.0078 2003. 0.3190 0.3359
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0040 1171. 0.3190 0.3347
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0042 1229. 0.3190 0.3406
0.0054 1505. 0.3190 0.3558
0.0066 1767. 0.3190 0.3527
0.0078 2003. 0.3190 0.3359
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0078 2003. 0.3190 0.3359
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AVG STD DEV A B C
YIELD STRESS = 7127.899 189.515 6168.574 6558.217 6768.768
SECANT TO YIELD STRESS = 156025.181 125026. 143555. 148164.
AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.008 256866. 0.008 81100. 0.008 152300. 0.008 101066.
4 0.022 213770. 0.022 168051. 0.022 186621. 0.022 196655.
6 0.037 183731. 0.037 163804. 0.037 171898. 0.037 176272.
8 0.046 156025. 0.046 135026. 0.046 143555. 0.046 148164.
STRAIN AT 2ND PT ON BASE CURVE = 0.008
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.008 6640. 214561. 213784. 214100. 214270.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES = 214559.
AREA UNDER AVERAGE DESIGN CURVE = 5569.144
```

Figure H112. Computer Run SWU605

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TEST SPECIMENS-	END POINT STRESS	STRAIN					
1 SWU605RH-6	13580.	0.574					
2 SWU605RH-7	13986.	0.561					
3 SWU605RH-8	13604.	0.583					
4 SWU605RH-9	13168.	0.586					
5 SWU605RH-10	14178.	0.593					
	AVG	STD DEV	A	B	C		
FFRACTURE STRAINS	= 0.564	0.034	0.366	0.246	0.490		
FFRACTURE STRESSES	= 13781.600	395.437	11431.393	12354.345	12851.400		
ORIGINAL CURVES TRUNCATED AT 0.066 STRAIN							
BASE CURVE IS 5 OF CURVES USED.							
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC			
	0.0014	367.	0.3370	0.3775			
	0.0022	548.	0.3370	0.3826			
	0.0029	741.	0.3370	0.3874			
	0.0037	939.	0.3370	0.3923			
	0.0045	1143.	0.3370	0.3972			
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC			
	0.0011	269.	0.3370	0.3704			
	0.0014	367.	0.3370	0.3775			
	0.0019	454.	0.3370	0.3800			
	0.0022	548.	0.3370	0.3826			
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC			
	0.0022	548.	0.3370	0.3826			
	0.0026	644.	0.3370	0.3833			
	0.0029	741.	0.3370	0.3834			
	0.0033	840.	0.3370	0.3838			
	0.0037	939.	0.3370	0.3823			
	0.0041	1041.	0.3370	0.3813			
	0.0045	1143.	0.3370	0.3802			
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC			
	0.0045	1143.	0.3370	0.3802			
	0.0053	1387.	0.3370	0.3444			
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC			
	0.0399	8342.	0.3370	0.3484			
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC			
	0.0399	8342.	0.3370	0.3484			
	0.0400	8466.	0.3370	0.3550			
	0.0410	8501.	0.3370	0.3615			
	0.0430	8715.	0.3370	0.3652			
	0.0440	8838.	0.3370	0.3675			
	0.0450	8950.	0.3370	0.3689			
	0.0461	9076.	0.3370	0.3699			
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC			
	0.0461	9076.	0.3370	0.3699			
	0.0472	9102.	0.3370	0.3712			
	0.0493	9302.	0.3370	0.3731			
	0.0493	9406.	0.3370	0.3760			
	0.0504	9503.	0.3370	0.3700			
	0.0515	9594.	0.3370	0.3846			
	0.0527	9679.	0.3370	0.3800			
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC			
	0.0527	9679.	0.3370	0.3800			
	0.0540	9774.	0.3370	0.3974			
	0.0554	9859.	0.3370	0.4055			
	0.0560	9935.	0.3370	0.4137			
	0.0582	10000.	0.3370	0.4217			
	0.0597	10055.	0.3370	0.4200			
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC			
	0.0611	10000.	0.3370	0.4350			
	0.0620	10120.	0.3370	0.4380			
	0.0629	10134.	0.3370	0.4410			
	0.0630	10141.	0.3370	0.4450			
	0.0647	10147.	0.3370	0.4472			
	0.0656	10153.	0.3370	0.4476			
	0.0665	10159.	0.3370	0.4480			
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.							

YIELD STRESS	AVG	STD DEV	A	B	C	
= 10401.375	630.200	6727.425	0227.002	0020.720		
SECANT TO YIELD STRESS	= 156507.301		101377.	127700.	135061.	
PC NO.	STRAIN	SEC	STRAIN	SFC	STRAIN	SEC
2	0.004	263910.	0.004	2196.	0.004	100506.
4	0.016	254630.	0.016	122630.	0.016	176200.
6	0.031	227462.	0.031	150506.	0.031	101846.
8	0.046	198845.	0.046	136142.	0.046	161634.
STRAIN AT 2ND PT ON BASE CURVE= 0.004						
ELASTIC MODULUS AT 0.004	35671.	265152.	81025.	156252.	196500.	
CHECK ON CALC-MEAN MODULUS ON TEST CURVES=	266586.					
WARNING-MAY SLOPE(F)=	260946.	AT STRAIN= 0.006				
AREA UNDER AVERAGE DESIGN CURVE=	6435.719					

Figure H113. Computer Run SWU605RH
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ex clat(standr) 'dl(swu605r2) g(e77623.d0211.fog016) l((tekeat) a(swu605r2)'
#### LOAD MODULE RELOCATION FACTOR = 0AFF3B #####
TEKSGT.CMG 12C, 1-26-78; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.00388 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SWUG05RH-1 15931. 0.517
2 SWUG05RH-2 15345. 0.480
3 SWUG05RH-3 17614. 0.437
4 SWUG05RH-4 16874. 0.476
5 SWUG05RH-5 15287. 0.322
      AUG STD DEV
FRACTURE STRAINS      0.446 0.075 0.015 0.191 0.285
FRACTURE STRESSES     16210.198 1011.199 10404.906 12765.044 14036.121
ORIGINAL CURVES TRUNCATED AT 0.009 STRAIN
BASE CURVE IS 5 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
      AUG STD DEV
YIELD STRESS          13223.711 1092.780 6950.050 9500.608 10874.233
SECANT TO YIELD STRESS 133847.503 70347. 96163. 110067.
      AUG
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.011 280769. 0.011 96165. 0.011 171215. 0.011 211635.
4 0.025 248536. 0.025 174282. 0.025 204470. 0.025 220728.
6 0.042 217334. 0.042 181468. 0.042 196049. 0.042 203902.
8 0.065 183721. 0.065 145797. 0.065 161215. 0.065 169519.
STRAIN AT 2ND PT ON BASE CURVE= 0.005
      STRAIN STD DEV AUG
ELASTIC MODULUS AT 0.005 44633. 289853. 90813. 171733. 215313.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 289576.
WARNING-MAX SLOPE(E)= 293026. AT STRAIN= 0.006
AREA UNDER AVERAGE DESIGN CURVE= 6007.291

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Figure H114. Computer Run SWU605RH

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ex clatlasttr: d11swu605rh) g(a77623.d0211.fag017) 1(test)
===== LOAD MODULE RELOCATION FACTOR = 080F38 =====
TEKSSST,CHG 12C, 1-26-78; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.00388 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SWUG05RH-11 10445. 0.672
2 SWUG05RH-11 13045. 0.704
3 SWUG05RH-13 13190. 0.734
4 SWUG05RH-14 11019. 0.679
5 SWUG05RH-15 11848. 0.700
6 SWUG05RH-16 12282. 0.700
          AUG STD DEV
FRACTURE STRAINS      . 0.699 0.022
FRACTURE STRESSES     . 11971.500 1094.191
ORIGINAL CURVES TRUNCATED AT 0.046 STRAIN
BASE CURVE IS 5 OF CURVES USED.
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0420 7070. 0.3190 0.3389
0.0429 7094. 0.3190 0.3344
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0420 7070. 0.3190 0.3389
0.0425 7090. 0.3190 0.3594
0.0429 7094. 0.3190 0.3344
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0429 7094. 0.3190 0.3344
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
          AUG STD DEV
YIELD STRESS      . 7137.737 145.703
SECANT TO YIELD STRESS -155679.919
          A B C
          6400.186 6699.752 6861.629
          139593. 146127. 149658.
PC NO. STRAIN SEC. STRAIN SEC. STRAIN SEC. STRAIN SEC.
2 0.007 254595. 0.007 172175. 0.007 205651. 0.007 223740.
4 0.023 211743. 0.023 173993. 0.023 189326. 0.023 197611.
6 0.033 190826. 0.033 169526. 0.033 178177. 0.033 182852.
8 0.043 165190. 0.043 149883. 0.043 156100. 0.043 159459.
STRAIN AT 2ND PT ON BASE CURVE- 0.007
          STRAIN STD DEV AUG A B C
ELASTIC MODULUS AT 0.007 25550. 229618. 161864. 189383. 204254.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES- 227872.
DX/DU IS NEGATIVE AT U=0 ON PC 1
AREA UNDER AVERAGE DESIGN CURVE- 6452.128

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Figure H115. Computer Run SWU605RH

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ex clst(stsstr) 'a1(tex5717) 1(teksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 ****
TEKSST,CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS-   END POINT STRESS   STRAIN
1  TEKS71-7       13328.    0.585
2  TEKS71-8       14308.    0.602
3  TEKS71-9       14504.    0.556
4  TEKS71-10      12072.    0.581
5  TEKS71-11      14058.    0.553
6  TEKS71-12      10946.    0.413

STRAIN AT FRACTURE POINT IS NOT NORMAL
          AVG STD DEV          A          B          C
FRACTURE STRAINS      =    0.548    0.069    0.199    0.341    0.417
FRACTURE STRESSES     = 13202.783 1416.420 6032.868 8945.026 10518.669
ORIGINAL CURVLS TRUNCATED AT 0.059 STRAIN
BASE CURVE IS 4 OF CURVES USED.
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
          0.0016    512.  0.3190 0.3595
          0.0024    768.  0.3190 0.3314
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
          0.0098   2952.  0.3190 0.3292
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
          0.0159   4543.  0.3190 0.3292
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
          0.0190   5264.  0.3190 0.3270
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
          0.0276   6869.  0.3190 0.3219
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
          0.0276   6869.  0.3190 0.3219
          0.0282   6962.  0.3190 0.3201
          0.0289   7054.  0.3190 0.3275
          0.0296   7146.  0.3190 0.3269
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
          AVG STD DEV          A          B          C
YIELD STRESS      = 9029.510  95.928 8543.923 8741.150 8847.726
SLOPE TO YIELD STRESS =152296.672 144106. 147433. 149231.
          AVG          A          B          C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2  0.008 304719. 0.008 290502. 0.008 296276. 0.008 299397.
4  0.017 283877. 0.017 276674. 0.017 279600. 0.017 281180.
6  0.028 249393. 0.028 241927. 0.028 244960. 0.028 246598.
8  0.036 219789. 0.036 212769. 0.036 215620. 0.036 217161.
STRAIN AT 2ND PT ON BASE CURVE= 0.005
          STRAIN STD DEV          AVG          A          B          C
ELASTIC MODULUS AT 0.005 3833. 299336. 294257. 296320. 297435.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 299336.
AREA UNDER AVERAGE DESIGN CURVE= 5807.798

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Figure H116. Computer Run TEX571

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ex clat(atastr) 'dl(tex60517) g(a77623.d0211.fog018) ((bakeat)
===== LOAD MODULE RELOCATION FACTOR = 000F38 =====
TEKST,CMG 12C, 1-26-78, J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.00388 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 TEX605-7 14893. 0.562
2 TEX605-8 13088. 0.526
3 TEX605-9 14298. 0.572
4 TEX605-10 13533. 0.564
5 TEX605-11 13771. 0.555
          AUG STD DEV
FRACTURE STRAINS = 0.556 0.018
FRACTURE STRESSES = 13915.000 697.800
ORIGINAL CURVES TRUNCATED AT 0.063 STRAIN
BASE CURVE IS 2 OF CURVES USED.
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0046 1398. 0.3370 0.3483
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0570 10223. 0.3370 0.3457
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0570 10223. 0.3370 0.3457
0.0578 10258. 0.3370 0.3686
0.0585 10289. 0.3370 0.3966
0.0593 10317. 0.3370 0.4360
0.0601 10327. 0.3370 0.4310
0.0609 10333. 0.3370 0.4126
0.0617 10339. 0.3370 0.3991
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
          AUG STD DEV
YIELD STRESS = 10317.357 87.001
SECANT TO YIELD STRESS = 167174.594
          A B C
          159081. 162372. 164144.
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.005 279860. 0.005 79946. 0.005 161221. 0.005 204992.
4 0.011 276864. 0.011 130055. 0.011 189740. 0.011 221884.
6 0.018 260075. 0.018 165273. 0.018 203815. 0.018 224572.
8 0.025 243852. 0.025 182110. 0.025 207211. 0.025 220730.
STRAIN AT 2ND PT ON BASE CURVE = 0.002
          STRAIN STD DEV AUG
ELASTIC MODULUS AT 0.002 33037. 276967. 139644. 195473. 225540.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES = 277115.
WARNING-MAX SLOPE(E) = 286838. AT STRAIN = 0.007
AREA UNDER AVERAGE DESIGN CURVE = 6390.760

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Figure H117. Computer Run TEX605

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ex clst(stsstr) 'd1(tex605f1) a(e77623.d0211.fea019) l(teksst) a(tex605f1)
**** LOAD MODULE RELOCATION FACTOR = 0AFF38 *****
TEKST.CHG 12C, 1-26-78: J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS.10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.00388 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 TEX605-1 14713. 0.456
2 TEX605-3 18703. 0.436
3 TEX605-4 15418. 0.484
4 TEX605-5 20780. 0.465
5 TEX605-6 17232. 0.398
AVG STD DEV A B C
FRACTURE STRAINS = 0.448 0.033 0.260 0.336 0.377
FRACTURE STRESSES = 17360.199 2464.446 3220.812 8972.830 12070.640
ORIGINAL CURVES TRUNCATED AT 0.091 STRAIN
BASE CURVE IS 5 OF CURVES USED.
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0541 11063. 0.3370 0.3629
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0541 11063. 0.3370 0.3629
0.0561 11286. 0.3370 0.3747
0.0582 11567. 0.3370 0.3458
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AVG STD DEV A B C
YIELD STRESS = 13605.116 1597.722 4432.592 8161.676 10170.013
SECANT TO YIELD STRESS = 148949.236 48528. 89354. 111342.
AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.007 305506. 0.007 -87432. 0.007 72317. 0.007 159351.
4 0.019 274963. 0.019 94055. 0.019 168078. 0.019 207513.
6 0.034 238730. 0.034 140813. 0.034 180621. 0.034 202060.
8 0.054 206480. 0.054 137284. 0.054 165416. 0.054 180566.
STRAIN AT 2ND PT ON BASE CURVE = 0.007
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.007 51809. 301104. 43862. 148480. 204823.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES = 298153.
AREA UNDER AVERAGE DESIGN CURVE = 6343.568

```

Figure H118. Computer Run TEX605

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TEST SPECIMENS-	END POINT STRESS	STRAIN
1 TEX605-13	13011.	0.602
2 TEX605-14	12760.	0.607
3 TEX605-15	9075.	0.605
4 TEX605-16	9030.	0.500
5 TEX605-17	9956.	0.595
6 TEX605-18	9886.	0.701

	AVG	STD DEV	A	B	C
FRACTURE STAINS	= 0.658	0.073	0.207	0.437	0.510
FRACTURE STRESSES	= 10554.333	1700.099	1007.937	5419.700	7317.406

ORIGINAL CURVES TRUNCATED AT 0.047 STRAIN

BASE CURVE IS 4 OF CURVES USED.

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0312	6462.	0.3100	0.3207
	0.0321	6504.	0.3100	0.3426
	0.0329	6704.	0.3100	0.3560

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0329	6704.	0.3100	0.3560
	0.0327	6807.	0.3100	0.3550
	0.0345	6904.	0.3100	0.3527
	0.0353	6907.	0.3100	0.3502
	0.0361	7005.	0.3100	0.3400
	0.0369	7169.	0.3100	0.3401
	0.0377	7240.	0.3100	0.3511

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0377	7240.	0.3100	0.3511
	0.0389	7245.	0.3100	0.3566
	0.0400	7430.	0.3100	0.3651
	0.0411	7491.	0.3100	0.3656
	0.0423	7500.	0.3100	0.3200
	0.0435	7436.	0.3100	0.3591
	0.0447	7493.	0.3100	0.4194

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0377	7240.	0.3100	0.3511
	0.0383	7290.	0.3100	0.3534
	0.0389	7345.	0.3100	0.3566
	0.0394	7389.	0.3100	0.3605
	0.0400	7430.	0.3100	0.3651
	0.0406	7467.	0.3100	0.3690
	0.0411	7491.	0.3100	0.3656

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0411	7491.	0.3100	0.3656
	0.0417	7496.	0.3100	0.3411
	0.0423	7500.	0.3100	0.3200
	0.0429	7400.	0.3100	0.3237
	0.0435	7436.	0.3100	0.3591
	0.0441	7468.	0.3100	0.3915
	0.0447	7493.	0.3100	0.4194

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0447	7493.	0.3100	0.4194
	0.0450	7505.	0.3100	0.4306
	0.0453	7514.	0.3100	0.4395
	0.0457	7522.	0.3100	0.4464
	0.0460	7520.	0.3100	0.4503
	0.0463	7530.	0.3100	0.4504

	AVG	STD DEV	A	B	C
YIELD STRESS	= 7448.120	282.579	6017.715	6500.697	6912.642
SECANT TO YIELD STRESS	= 159785.963		129099.	141563.	140298.

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.006	292742.	0.006	130549.	0.006	201177.	0.006	235019.
4	0.020	226973.	0.020	161701.	0.020	100212.	0.020	202530.
6	0.033	199560.	0.033	154001.	0.033	173037.	0.033	102043.
8	0.041	170613.	0.041	145139.	0.041	150735.	0.041	160002.

STRAIN AT 2ND PT ON BASE CURVE= 0.006

	STRAIN	STD DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.006	23399.	245116.	225250.	233324.	237602.	

CHECK ON ALC-MEAN MODULUS ON TEST CURVES= 245241

AREA UNDER AVERAGE DESIGN CURVE= 5774.577

Figure H119. Computer Run TEX605


```

xx clat(atboot) 'd11(ter005x) g(a77623.d0211.f0024) ((take0) a(ter005x)'
3EJ667121 INVALID KEYWORD, 00(E77623.D0211.F0024)
IKJ67033A REENTER -
      g(a77623.d0211.f0024)
4233 LOAD MODULE RELOCATION FACTOR = 00F738 00000000
TEXTST,CHG 12C, 1-26-78, J.F.BURKE XJ7644
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
      ENTER NUMBER OF DATA FILES

```

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

Figure H120. Computer Run TEX605X

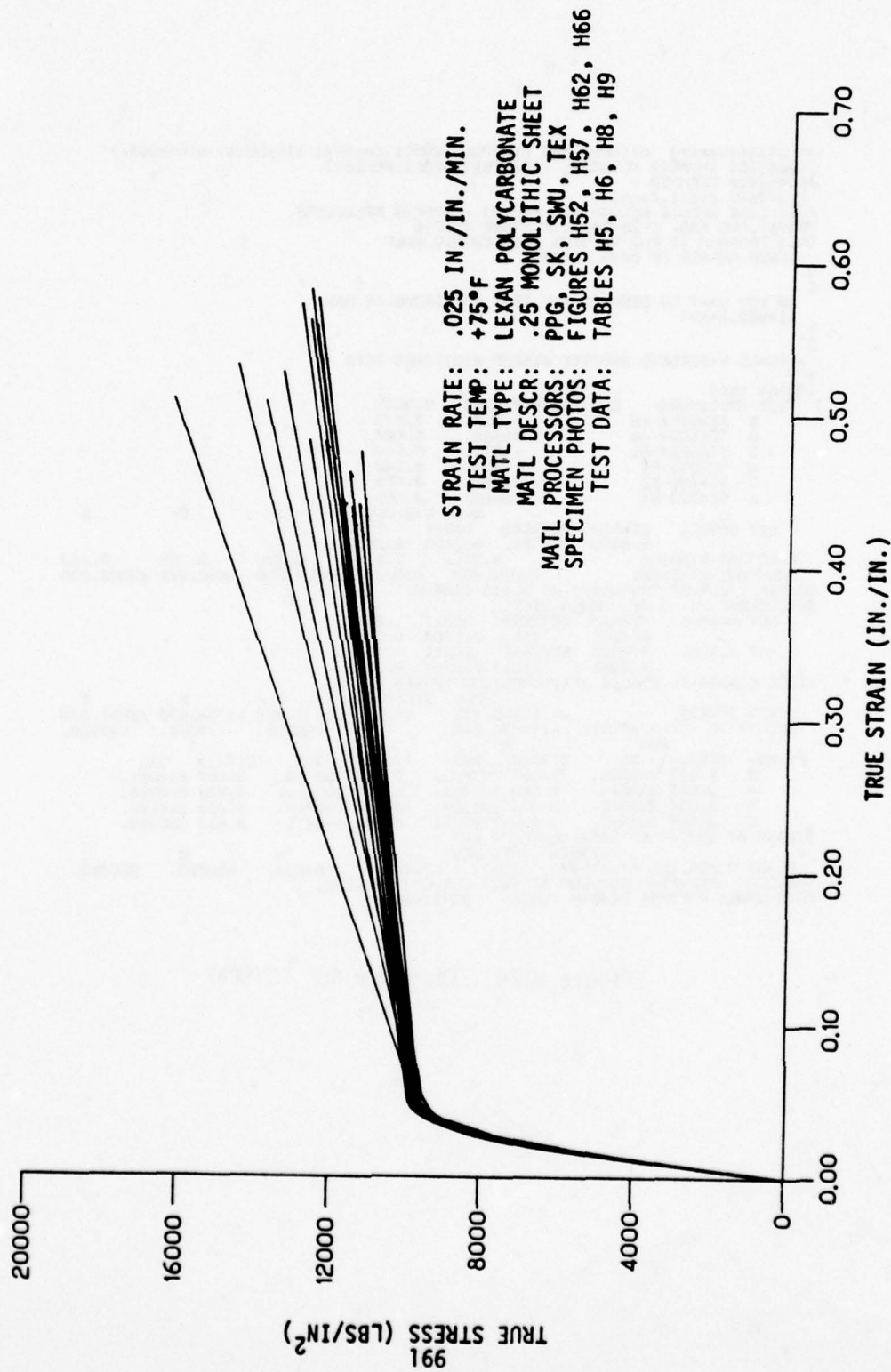


Figure H121 Tensile Test Curves - Proposed Design Allowable.

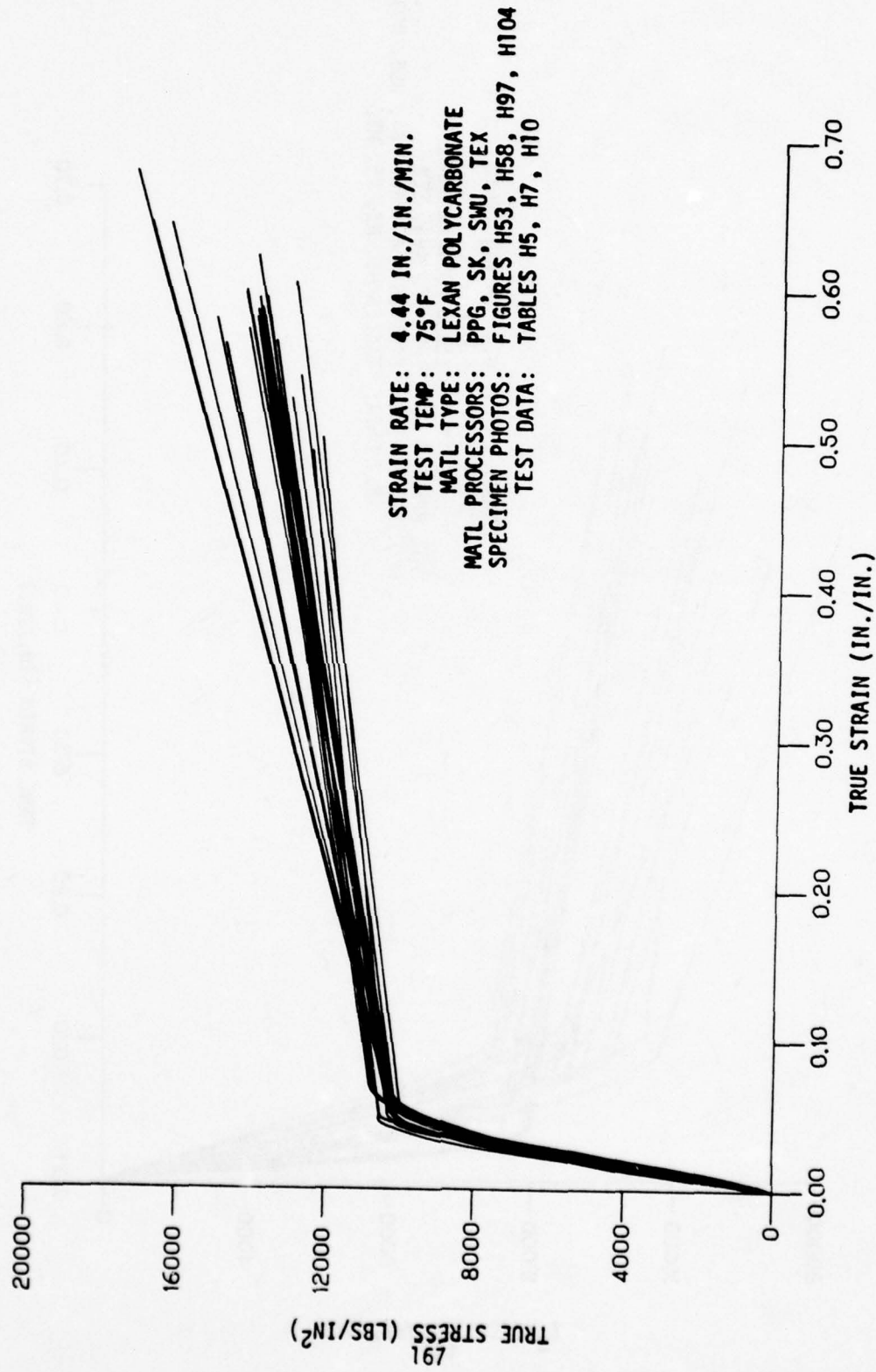


Figure H122 Tensile Test Curves - Proposed Design Allowable.

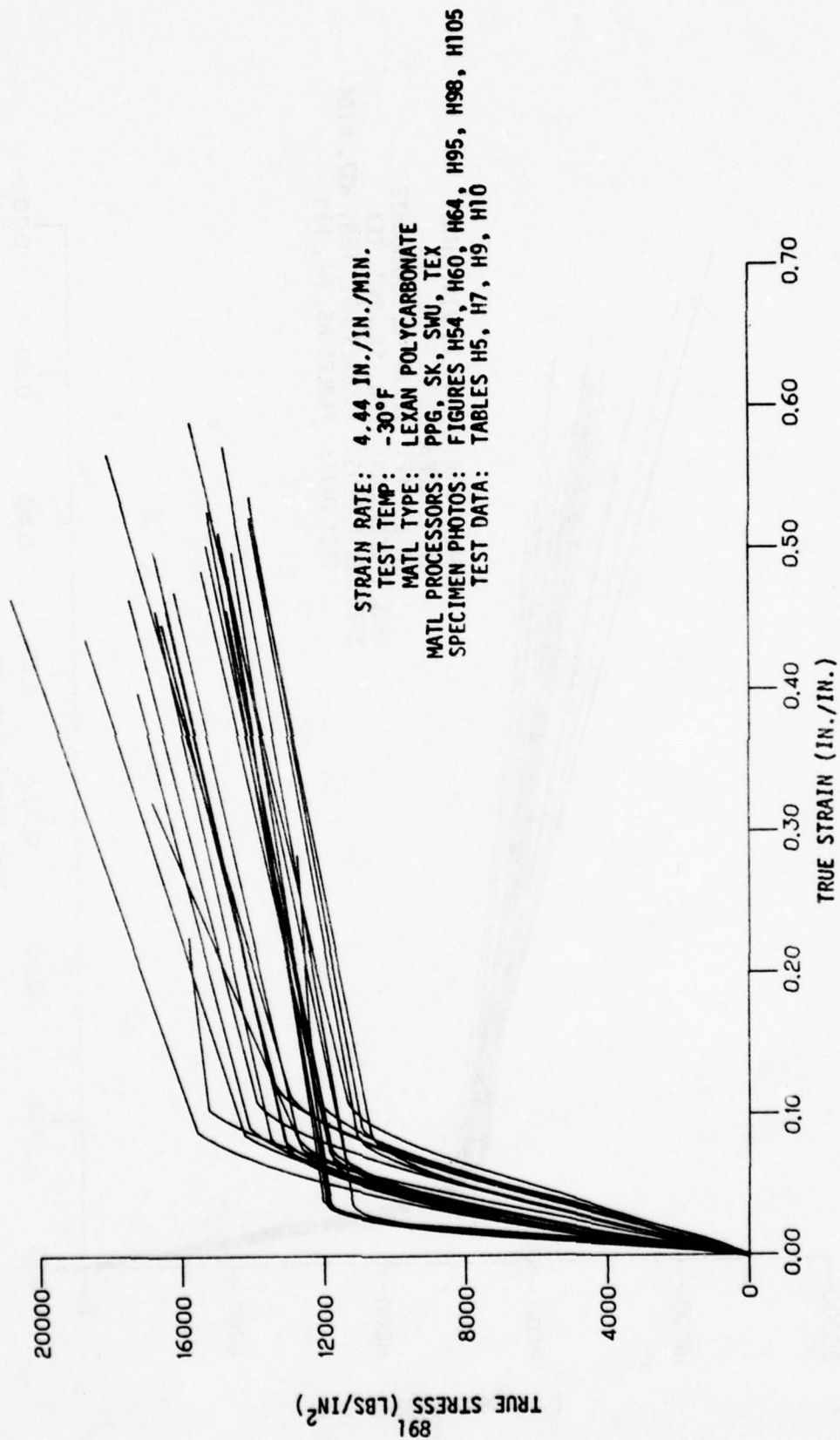


Figure H123 Tensile Test Curves - Proposed Design Allowable.

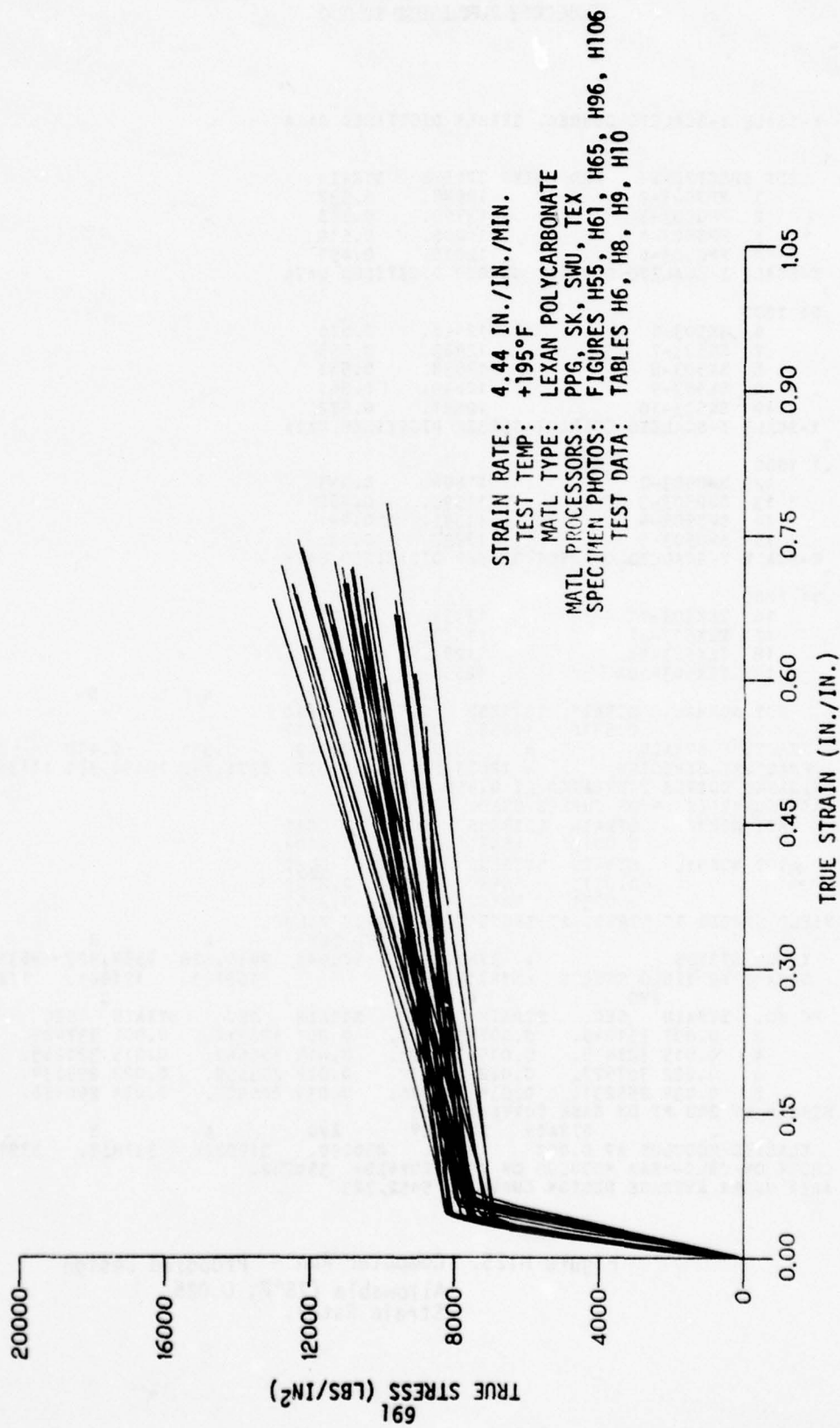


Figure H124 Tensile Test Curves - Proposed Design Allowable.

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X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

?

1 1

TEST SPECIMENS-	END POINT STRESS	STRAIN
1 PPG503-2	14548.	0.532
2 PPG503-3	13795.	0.503
3 PPG503-4	16206.	0.510
4 PPG503-6	12015.	0.491

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

?

.01 1000

6 SK503-6	12448.	0.576
7 SK503-7	12483.	0.558
8 SK503-8	12638.	0.581
9 SK503-9	12640.	0.561
10 SK503-10	12881.	0.572

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

?

.1 1000

12 SWU503-2	11806	0.443
13 SWU503-3	11593.	0.462
14 SWU503-4	11341.	0.441
15 SWU503-5	12237.	0.482

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

?

.01 1000

16 TEX503-7X	13354.	0.527
17 TEX503-8X	11523.	0.439
18 TEX503-9X	11289.	0.475
19 TEX503-10X	12655.	0.482

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	AVG	STD DEV	A	B	C
	0.5316	12655.	0.2050	0.2117					
FRACTURE STRAINS	=	0.508	0.049				0.341	0.410	0.448
FRACTURE STRESSES	=	12673.644	1260.077				8371.742	10150.970	11135.350

ORIGINAL CURVES TRUNCATED AT 0.056 STRAIN
BASE CURVE IS 4 OF CURVES USED.

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0215	6648.	0.2050	0.2103
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0215	6648.	0.2050	0.2103
	0.0231	7016.	0.2050	0.2357

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

	AVG	STD DEV	A	B	C
YIELD STRESS	= 9750.997	97.941	9416.628	9554.920	9631.510
SECANT TO YIELD STRESS	= 174714.485		168723.	171201.	172574.

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.007	351649.	0.007	311855.	0.007	320314.	0.007	337429.
4	0.015	328475.	0.015	308293.	0.015	316640.	0.015	321263.
6	0.022	307577.	0.022	283772.	0.022	293659.	0.022	299134.
8	0.034	255231.	0.034	241036.	0.034	246907.	0.034	250158.

STRAIN AT 2ND PT ON BASE CURVE= 0.003

	STRAIN	STD DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.003	10562.		350290.	319029.	331958.	339149.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES=			350262.			
AREA UNDER AVERAGE DESIGN CURVE=			5452.723			

Figure H125. Computer Run - Proposed Design
Allowable (75°F, 0.025
Strain Rate).

[illegible]

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TEST SPECIMENS-	END POINT STRESS	STRAIN
1 TEX605-1	14713.	0.456
2 TEX605-3	18701.	0.436
3 TEX605-4	15418.	0.484
4 TEX605-5	20780.	0.465
5 TEX605-6	17232.	0.398
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA		
.00388 1000		
6 SWU605-1	14844.	0.501
7 SWU605-2	16758.	0.498
8 SWU605-3	16411.	0.456
9 SWU605-4	15278.	0.502
10 SWU605-5	16181.	0.469
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA		
.00388 1000		
11 SK605-3	16826.	0.321
12 SK605-4	16720.	0.456
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA		
.00523 1000		
13 PPG503-6	12749.	0.283
14 PPG503-7	18085.	0.568
15 PPG503-7	15741.	0.589
16 PPG503-9	16535.	0.486
17 PPG503-10	14000.	0.517
18 SK503-1	14814.	0.572
19 SK503-2	14551.	0.497
20 SK503-3	15251.	0.526
21 SK503-4	14921.	0.511
22 SK503-5	14665.	0.480
23 SWU503-6	14065.	0.522
25 SWU503-8	17457.	0.464
26 SWU503-9	14083.	0.536
AVG STD DEV		
FRACTURE STRAINS = 0.478 0.069 0.260 0.351 0.402		
FRACTURE STRESSES = 15871.244 1742.992 10366.874 12667.624 13948.724		
ORIGINAL CURVES TRUNCATED AT 0.122 STRAIN		
BASE CURVE IS 16 OF CURVES USED.		
NOT NORMAL	STRAIN	SSTRESS DCRIT DCAC
NOT NORMAL	STRAIN	SSTRESS DCRIT DCAC
	0.0451	9237. 0.1800 0.1911
	0.0451	9237. 0.1800 0.1911
	0.0470	9493. 0.1800 0.2015
	0.0488	9725. 0.1800 0.2088
	0.0498	9781. 0.1800 0.1806
	0.0506	9938. 0.1800 0.2135
	0.0506	10035. 0.1800 0.1946
	0.0525	10136. 0.1800 0.2164
	0.0525	10280. 0.1800 0.2084
	0.0543	10326. 0.1800 0.2185
	0.0543	10517. 0.1800 0.2223
	0.0543	10523. 0.1800 0.1836
	0.0562	10509. 0.1800 0.2201
	0.0562	10733. 0.1800 0.2330
	0.0562	10743. 0.1800 0.1953
NOT NORMAL	STRAIN	SSTRESS DCRIT DCAC
	0.0562	10509. 0.1800 0.2201
	0.0562	10733. 0.1800 0.2330
	0.0562	10743. 0.1800 0.1953
	0.0582	10700. 0.1800 0.2217
	0.0582	10884. 0.1800 0.2298
	0.0582	10976. 0.1800 0.2083
	0.0603	10886. 0.1800 0.2234
	0.0603	11045. 0.1800 0.2233
	0.0603	11201. 0.1800 0.2217
	0.0603	11202. 0.1800 0.1821
	0.0623	11065. 0.1800 0.2253
	0.0623	11170. 0.1800 0.2126
	0.0623	11357. 0.1800 0.2202
	0.0623	11373. 0.1800 0.1840
	0.0644	11235. 0.1800 0.2269
	0.0644	11271. 0.1800 0.1968
	0.0644	11387. 0.1800 0.1874
	0.0665	11450. 0.1800 0.2161
	0.0665	11391. 0.1800 0.1873
	0.0686	11407. 0.1800 0.1906
NOT NORMAL	STRAIN	SSTRESS DCRIT DCAC
	0.0686	11407. 0.1800 0.1906
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.		
AVG STD DEV		
YIELD STRESS = 12812.319 1205.713 8995.205 10590.705 11479.109		
SECANT TO YIELD STRESS = 104820.214 73592. 86645. 93913.		
AVG		
PC NO.	STRAIN	SFC STRAIN SEC STRAIN SEC STRAIN SEC
2	0.024	256877. 0.024 66480. 0.024 68563. 0.024 143868.
4	0.045	203421. 0.045 62623. 0.045 121475. 0.045 154244.
6	0.069	165688. 0.069 101209. 0.069 141444. 0.069 143142.
8	0.103	121765. 0.103 84976. 0.103 100936. 0.103 109267.
STRAIN AT 2ND PT ON BASE CURVE = 0.012		
STRAIN STD DEV		
ELASTIC MODULUS AT 0.012 129070. 274757. -122942. 43291. 135852.		
CHECK ON CALC-MEAN MODULUS ON TEST CURVES = 275051.		
AREA UNDER AVERAGE DESIGN CURVE = 6249.703		

Figure H127. Computer Run - Proposed Design Allowables (=30°F, 4.44 Strain Rate).

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TEST SPECIMENS- END POINT STRESS STRAIN
1 3WU503 -11 9530. 0.685
2 3WU503 -12 10290. 0.690
3 3WU503 -13 10830. 0.715
4 3WU503 -14 11450. 0.677
5 3WU503 -15 10970. 0.699
X-SCALE Y-SCALE TO CORRECT GERRER DIGITISED DATA
.00388 1000
6 3K605-15 11322. 0.721
7 3K605-13 10400. 0.683
8 3K605-10 8783. 0.550
X-SCALE Y-SCALE TO CORRECT GERRER DIGITISED DATA
.00388 1000
9 3K605-13 11011. 0.642
10 3K605-14 12360. 0.687
11 3K605-15 9075. 0.605
12 3K605-16 9030. 0.598
13 3K605-17 9950. 0.595
14 3K605-18 9880. 0.781
X-SCALE Y-SCALE TO CORRECT GERRER DIGITISED DATA
.00523 1000
15 3K503-11 9630. 0.681
16 3K503-12 12330. 0.744
17 3K503-13 11842. 0.677
18 3K503-14 9650. 0.665
19 3K503-15 12110. 0.634
20 3K503-16 11111. 0.774
21 3K503-17 10860. 0.713
22 3K503-18 13862. 0.697
23 3K503-19 10590. 0.706
24 3K503-20 12780. 0.717
          AVG STD DEV
FRACTURE STRESS = 0.677 0.052
FRACTURE STRESS = 10750.600 1201.551 6926.476 1524.135 9812.081
BASE CURVE IS 12 OF CURVES USED.
NOT NORMAL STRAIN STRESS CORRT NCAC
0.0023 375. 0.1850 0.1923
0.0023 380. 0.1850 0.2180
0.0070 1090. 0.1850 0.1883
0.0083 1040. 0.1850 0.2080
0.0117 1787. 0.1850 0.2160
0.0140 2120. 0.1850 0.2195
0.0140 3270. 0.1850 0.2095
0.0140 3100. 0.1850 0.2117
0.0140 3440. 0.1850 0.1934
NOT NORMAL STRAIN STRESS CORRT NCAC
0.0140 2120. 0.1850 0.2195
0.0140 3270. 0.1850 0.2095
0.0140 3100. 0.1850 0.2117
0.0140 3440. 0.1850 0.1934
0.0162 2510. 0.1850 0.2000
0.0162 3400. 0.1850 0.1905
0.0162 3047. 0.1850 0.1919
0.0162 3011. 0.1850 0.2309
0.0162 3720. 0.1850 0.1942
0.0185 3860. 0.1850 0.1981
0.0185 4510. 0.1850 0.2219
0.0185 8132. 0.1850 0.1855
0.0207 4455. 0.1850 0.2044
0.0207 6200. 0.1850 0.2013
0.0207 6600. 0.1850 0.2045
0.0230 8600. 0.1850 0.2118
0.0230 8700. 0.1850 0.2014
0.0230 8000. 0.1850 0.1970
0.0252 5000. 0.1850 0.2177
0.0252 6120. 0.1850 0.1888
0.0252 6210. 0.1850 0.1978
0.0252 4822. 0.1850 0.1906
0.0275 4842. 0.1850 0.2172
0.0275 4840. 0.1850 0.1981
0.0275 4741. 0.1850 0.1906
NOT NORMAL STRAIN STRESS CORRT NCAC
0.0275 4842. 0.1850 0.2172
0.0275 4840. 0.1850 0.1981
0.0275 4741. 0.1850 0.1906
0.0299 5780. 0.1850 0.2068
0.0299 4300. 0.1850 0.1957
0.0299 4190. 0.1850 0.1908
0.0320 4300. 0.1850 0.1939
0.0320 6330. 0.1850 0.1946
0.0320 4470. 0.1850 0.1913
0.0340 6600. 0.1850 0.1950
0.0340 4701. 0.1850 0.1914
0.0360 6750. 0.1850 0.1975
0.0360 6750. 0.1850 0.2020
0.0380 7030. 0.1850 0.1937
0.0380 7030. 0.1850 0.1967
0.0380 7250. 0.1850 0.2172
0.0380 7350. 0.1850 0.2006
0.0412 7270. 0.1850 0.2035
0.0412 7402. 0.1850 0.2279
0.0412 7601. 0.1850 0.1903
NOT NORMAL STRAIN STRESS CORRT NCAC
0.0412 7270. 0.1850 0.2035
0.0412 7402. 0.1850 0.2279
0.0412 7601. 0.1850 0.1903
0.0423 7101. 0.1850 0.2052
0.0423 7500. 0.1850 0.2072
0.0435 7435. 0.1850 0.2057
0.0435 7500. 0.1850 0.1986
0.0440 7400. 0.1850 0.2035
0.0457 7524. 0.1850 0.1974
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
          AVG STD DEV
YIELD STRESS = 7744.840 316.223 6737.057 7257.797 7401.929
DECAT TO YIELD STRESS = 109034.378 15027. 100875. 104129.
          AVG
PC TO STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.027 178700. 0.027 44110. 0.027 100150. 0.027 111611.
4 0.049 140771. 0.049 95410. 0.049 118110. 0.049 110782.
6 0.068 122410. 0.068 105410. 0.068 112110. 0.068 116109.
8 0.072 109310. 0.072 10027. 0.072 100875. 0.072 104129.
STRAIN AT 2ND PT ON RATE CURVE = 0.014
          AVG STD DEV
ELASTIC MODULUS AT 0.014 = 4150. 17081. 49261. 105600. 131526.
OPTIC ON CALCULATED MODULUS ON RATE CURVES = 177455.
AREA UNDER AVERAGE DESIGN CURVE = 6010.528

```

Figure H128. Computer Run - Proposed Design Allowables (195°F, 4.44 Strain Rate).

TABLE H1. TENSILE TEST DATA

TEST MEASUREMENT DATA										TEST CALCULATIONS DATA				
TEST SPECIMEN NUMBER	TEST TEMP (°F)	LOAD RATE (IN./MIN.)	GAGE LENGTH (IN.)	SPECIMEN LENGTH		GAGE AREA		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	STRAIN RATE (IN./IN./MIN)	PERCENT ELASTIC ELONG. TO YIELD	PERCENT PLASTIC ELONG. TO RUPTURE	TRUE RUPTURE STRESS (LBS/IN. ²)	TRUE RUPTURE STRAIN (IN./IN.)
				BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)							
PPG517-1	76	.050	2.00	4.000	6.945	.0926	.0490	855	849	.025	----	----	17327	.6365
PPG517-2	76	.050	2.00	4.000	7.195	.0915	.0490	848	893	.025	----	----	18196	.6256
PPG517-3	76	.050	2.00	4.000	7.020	.0916	.0490	853	855	.025	----	----	17449	.6265
PPG517-4	76	.050	2.00	4.000	7.240	.0920	.0501	860	890	.025	----	----	17764	.6078
PPG517-5	76	.050	2.00	4.000	6.955	.0921	.0509	852	850	.025	----	----	16699	.5930
PPG517-1	74	.050	2.00	4.000	5.375	.3562	.2165	3550	2550	.025	----	----	11778	.4979
PPG517-2	74	.050	2.00	4.000	5.750	.3568	.2112	3560	2640	.025	----	----	12499	.5244
PPG517-3	74	.050	2.00	4.000	5.813	.3632	.2266	3770	2760	.025	----	----	12180	.4718
PPG517-4	74	.050	2.00	4.000	6.063	.3615	.2318	3735	2820	.025	----	----	12166	.4443
PPG517-5	74	.050	2.00	4.000	5.125	.3652	.2373	3750	2640	.025	----	----	11125	.4311
PPG517-1	74	.050	2.00	4.000	7.421	.0928	.0487	863	907	.025	----	----	18624	.6448
PPG517-2	74	.050	2.00	4.000	6.477	.0925	.0563	863	785	.025	----	----	13943	.4965
PPG517-3	74	.050	2.00	4.000	6.373	.0927	.0559	865	765	.025	----	----	13685	.5059
PPG517-4	74	.050	2.00	4.000	6.969	.0928	.0525	860	850	.025	----	----	16190	.5697
PPG517-5	74	.050	2.00	4.000	6.994	.0918	.0520	847	835	.025	----	----	16058	.5684
SK507-1	76	.050	2.00	4.580	6.937	.6355	.3475	6100	4200	.025	----	----	12086	.6036
SK507-2	76	.050	2.00	4.580	6.188	.6076	.3376	5800	4500	.025	----	----	13329	.5875
SK507-3	76	.050	2.00	4.580	7.375	.6153	.3337	5875	5350	.025	----	----	16302	.6119
SK507-4	76	.050	2.00	4.580	6.063	.6467	.3732	6175	4675	.025	----	----	12527	.5501
SK507-5	76	.050	2.00	4.580	6.063	.6185	.3520	5950	4500	.025	----	----	12784	.5637

TABLE H2. TENSILE TEST DATA

TEST MEASUREMENT DATA										TEST CALCULATIONS DATA				
TEST SPECIMEN NUMBER	TEST TIME (OF)	LOAD RATE (IN./MIN.)	GAGE LENGTH (IN.)	SPECIMEN LENGTH		GAGE AREA		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	STRAIN RATE (IN./IN./MIN)	PERCENT ELASTIC ELONG. TO YIELD	PERCENT PLASTIC ELONG. TO RUPTURE	TRUE RUPTURE STRESS (LBS/IN. ²)	TRUE RUPTURE STRAIN (IN./IN.)
				BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)							
SK509-1	78	.050	.500	----	----	.0189	.0106	168	138	.100	----	----	13019	.5783
SK509-2	78	.050	.500	----	----	.0192	.0101	177	166	.100	----	----	16436	.6424
SK509-3	78	.050	.500	----	----	.0173	.0101	152	126	.100	----	----	12475	.5382
SK509-4	78	.050	.500	----	----	.0190	.0109	174	141	.100	----	----	12936	.5557
SK509-5	78	.050	.500	----	----	.0182	.0109	176	153	.100	----	----	14037	.5127
SHV543-1	75	.050	2.00	4.000	6.438	.0790	.0465	773	690	.025	----	----	14839	.5300
SHV543-2	75	.050	2.00	4.000	5.875	.0804	.0463	788	610	.025	----	----	13175	.5519
SHV543-3	75	.050	2.00	4.000	5.813	.0807	.0476	795	603	.025	----	----	12668	.5279
SHV543-4	75	.050	2.00	4.000	4.313	.0808	.0495	790	605	.025	----	----	12222	.4900
SHV543-5	75	.050	2.00	4.000	6.250	.0785	.0468	770	650	.025	----	----	13889	.5172
SHV543-6	75	.050	2.00	4.000	6.125	.0789	.0452	770	625	.025	----	----	13827	.5571
TEX605	72	.050	2.00	5.250	5.719	.3483	.1929	3440	2460	.025	----	----	12753	.5909
/0029-1	72	.050	2.00	5.297	5.563	.3483	.2000	3460	2430	.025	----	----	12150	.5547
TEX605	72	.050	2.00	5.250	5.531	.3460	.1994	3460	2460	.025	----	----	12337	.5511
/0029-3	72	.050	2.00	5.250	5.500	.3514	.1980	3490	2460	.025	----	----	12424	.5737
TEX605	72	.050	2.00	5.250	5.500	.3387	.2058	3430	2460	.025	----	----	11953	.4982
/0029-5	72	.050	2.00	5.281	5.500	.3211	.1830	3230	2280	.025	----	----	12459	.5623
TEX605	72	.050	2.00	5.328	5.700	.3225	.1805	3230	2400	.025	----	----	13296	.5804
/0029-7	72	.050	2.00	5.250	5.688	.3588	.2022	3600	2535	.025	----	----	12532	.5735
TEX605	78	.050	2.00	5.250	5.438	.3497	.2023	3510	2460	.025	----	----	12162	.5473
TEX605	78	.050	2.00	5.250	5.563	.3406	.2232	3450	2450	.025	----	----	10976	.4226
/0030-4	78	.050	2.00	5.250	5.563	.3422	.2041	3390	2400	.025	----	----	11760	.5168
TEX605	78	.050	2.00	5.250	5.625	.3200	.1891	3530	2430	.025	----	----	12851	.5260

TABLE H3. TENSILE TEST DATA

TEST MEASUREMENT DATA										TEST CALCULATIONS DATA					
TEST SPECIMEN NUMBER	TEST TEMP (°F)	LOAD RATE (IN./MIN.)	GAGE LENGTH (IN.)	SPECIMEN LENGTH		GAGE AREA		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	STRAIN RATE (IN./IN./MIN)	PERCENT ELASTIC ELONG. TO YIELD	PERCENT PLASTIC ELONG. TO RUPTURE	TRUE RUPTURE STRESS (LBS/IN. ²)	TRUE RUPTURE STRAIN (IN./IN.)	
				BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)								
TEX605 /0040-1	72	.050	2.00	5.375	5.531	.3598	.2297	3600	2520	.025	----	----	10971	.4488	
TEX605 /0040-3	72	.050	2.00	5.406	5.625	.3551	.2028	3520	2460	.025	----	----	12130	.5602	
TEX605 /0040-4	72	.050	2.00	5.516	5.719	.3526	.2021	3500	2460	.025	----	----	12122	.5566	
TEX605 /0040-5	72	.050	2.00	5.500	5.656	.3477	.1995	3515	2460	.025	----	----	12331	.5555	
TEX605 /0040-6	72	.050	2.00	5.500	6.000	.3357	.1914	3400	2430	.025	----	----	12696	.5619	
TEX605 /0040-7	72	.050	2.00	5.500	6.125	.3264	.1881	3335	2400	.025	----	----	12759	.5511	
TEX605 /01-1	75	.050	2.00	4.500	5.000	.4330	.2431	4220	3080	.025	----	----	12670	.5772	
TEX605 /01-2	75	.050	2.00	4.500	5.016	.4239	.2502	4230	2940	.025	----	----	11751	.5272	
TEX605 /01-3	75	.050	2.00	4.500	5.000	.4238	.2548	4240	3000	.025	----	----	11774	.5090	
TEX605 /01-4	75	.050	2.00	4.500	5.063	.4288	.2507	4300	3060	.025	----	----	12206	.5368	
TEX605 /01-5	75	.050	2.00	4.500	5.203	.4175	.2490	4200	2970	.025	----	----	11928	.5169	
TEX605 /05-1	75	.050	2.00	4.500	4.750	.4509	.2715	4530	3150	.025	----	----	11603	.5073	
TEX605 /05-2	75	.050	2.00	4.500	5.250	.4464	.2541	4500	3180	.025	----	----	12513	.5634	
TEX605 /05-3	75	.050	2.00	4.500	5.125	.4466	.2559	4510	3180	.025	----	----	12425	.5568	
TEX605 /05-4	76	.050	2.00	4.500	5.125	.4364	.2498	4390	3060	.025	----	----	12250	.5581	
TEX605 /05-5	75	.050	2.00	4.563	6.260	.4321	.2370	4350	3090	.025	----	----	12995	.5974	
TEX605 /C43-1	72	.050	2.00	5.250	5.500	.3207	.2119	3400	2460	.025	----	----	11609	.4143	
TEX605 /C43-2	72	.050	2.00	5.260	5.750	.3215	.1865	3260	2400	.025	----	----	12870	.5539	
TEX605 /C43-3	72	.050	2.00	5.250	5.501	.3248	.2209	3280	2400	.025	----	----	10869	.3859	
TEX605 /C43-4	72	.050	2.00	5.250	6.375	.3267	.1887	3280	2400	.025	----	----	12719	.5489	
TEX605 /C43-6	72	.050	2.00	5.250	6.500	.3212	.1911	3270	2380	.025	----	----	12454	.5193	
TEX605 /C43-11	72	.050	2.00	5.250	6.438	.3200	.2149	3260	2520	.025	----	----	11773	.3981	

TABLE H4. TENSILE TEST DATA

TEST MEASUREMENT DATA										TEST CALCULATIONS DATA				
TEST SPECIMEN NUMBER	TEST TEMP (°F)	LOAD RATE (IN./MIN.)	GAGE LENGTH (IN.)	SPECIMEN LENGTH		GAGE AREA		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	STRAIN RATE (IN./IN./MIN)	PERCENT ELASTIC ELONG. TO YIELD	PERCENT PLASTIC ELONG. TO RUPTURE	TRUE RUPTURE STRESS (LBS/IN. ²)	TRUE RUPTURE STRAIN (IN./IN.)
				BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)							
PPG503-2	75	.050	2.00	5.000	7.500	.1307	.0780	1290	1135	.025	----	----	14551	.5161
PPG503-3	75	.050	2.00	5.000	7.375	.1311	.0801	1295	1105	.025	----	----	13795	.4927
PPG503-4	75	.050	2.00	5.000	8.375	.1285	.0784	1282	1270	.025	----	----	16199	.4941
PPG503-5	75	.050	2.00	4.500	7.063	.1302	.0768	1245	1100	.025	----	----	14323	.5279
PPG503-6	75	.050	2.00	5.000	6.375	.1326	.0824	1305	990	.025	----	----	12015	.4758
PPG503-2	76	10	2.25	4.340	7.125	.1282	.0674	1315	1140	4.44	----	----	16905	.6429
PPG503-3	76	10	2.25	4.350	7.000	.1252	.0659	1290	1080	4.44	----	----	16378	.6418
PPG503-4	76	10	2.25	4.340	7.000	.1272	.0713	1310	1080	4.44	----	----	15148	.5789
PPG503-5	76	10	2.25	4.340	6.125	.1269	.0708	1305	975	4.44	----	----	13771	.5835
PPG503-16	76	10	2.25	4.350	7.375	.1243	.0632	1275	1095	4.44	----	----	17313	.6764
PPG503-6	30	10	2.25	2.720	3.781	.1286	.0969	1585	1235	4.44	----	----	12749	.2830
PPG503-7	30	10	2.25	2.720	3.125	.1272	.0722	1670	1305	4.44	----	----	18085	.5663
PPG503-8	30	10	2.25	2.720	3.250	.1269	.0704	1450	1108	4.44	----	----	15741	.5892
PPG503-9	30	10	2.25	2.720	3.250	.1261	.0807	1700	1335	4.44	----	----	16535	.4463
PPG503-10	30	10	2.25	2.720	3.312	.1270	.0757	1380	1060	4.44	----	----	14000	.5174
PPG503-11	195	10	2.25	2.750	3.125	.1272	.0644	990	620	4.44	----	----	9630	.6806
PPG503-12	195	10	2.25	2.750	5.750	.1271	.0604	970	745	4.44	----	----	12334	.7440
PPG503-13	195	10	2.25	2.750	5.875	.1263	.0642	965	735	4.44	----	----	11442	.6767
PPG503-14	195	10	2.25	2.750	4.188	.1249	.0642	950	620	4.44	----	----	9654	.6655
PPG503-15	195	10	2.25	2.750	6.312	.1244	.0660	980	800	4.44	----	----	12118	.6338

TABLE H5. TENSILE TEST DATA

TEST MEASUREMENT DATA										TEST CALCULATIONS DATA				
TEST SPECIMEN NUMBER	TEST TEST (OF)	LOAD RATE (IN./MIN.)	GAGE LENGTH (IN.)	SPECIMEN LENGTH		GAGE AREA		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	STRAIN RATE (IN./IN.-/MIN)	PERCENT ELASTIC ELONG. TO YIELD	PERCENT PLASTIC ELONG. TO RUPTURE	TRUE RUPTURE STRESS (LBS/IN. ²)	TRUE RUPTURE STRAIN (IN./IN.)
				BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)							
PPG517-1	75	.050	2.00	3.812	6.000	.0917	.0540	850	780	.025	----	----	14444	.5295
PPG517-2	75	.050	2.00	3.812	6.625	.0920	.0490	852	847	.025	----	----	17286	.6300
PPG517-3	75	.050	2.00	3.812	6.532	.0909	.0503	840	827	.025	----	----	16441	.5917
PPG517-4	75	.050	2.00	3.812	6.625	.0918	.0505	851	851	.025	----	----	16851	.5976
PPG517-5	75	.050	2.00	3.812	6.750	.0923	.0452	853	865	.025	----	----	19137	.7138
SK503-6	75	.050	2.00	4.750	4.406	.1285	.0723	1260	900	.025	----	----	12448	.5757
SK503-7	75	.050	2.00	4.406	5.688	.1282	.0735	1260	915	.025	----	----	12483	.5581
SK503-8	75	.050	2.00	4.406	5.219	.1295	.0724	1268	915	.025	----	----	12638	.5314
SK503-9	75	.050	2.00	4.406	4.750	.1248	.0712	1238	900	.025	----	----	12640	.5614
SK503-10	75	.050	2.00	----	----	.1280	.0722	1278	930	.025	----	----	12881	.5717
SK503-11	75	10	2.25	4.406	4.875	.1302	.0729	1400	1025	4.44	----	----	14060	.5801
SK503-12	75	10	2.25	4.406	4.625	.1298	.0795	1390	995	4.44	----	----	12516	.4906
SK503-13	75	10	2.25	4.406	4.781	.1285	.0716	1375	1005	4.44	----	----	13036	.5350
SK503-14	75	10	2.25	4.406	5.156	.1277	.0723	1365	1005	4.44	----	----	13900	.5695
SK503-15	75	10	2.25	4.406	4.656	.1292	.0714	1380	1000	4.44	----	----	14006	.5929
SK503-1	76	.05	2.00	4.000	7.437	.1242	.0644	1180	1250	.025	----	----	19410	.6571
SK503-2	76	.05	2.00	4.000	7.250	.1237	.0653	1175	1195	.025	----	----	18300	.6389
SK503-3	76	.05	2.00	4.000	7.000	.1235	.0689	1175	1120	.025	----	----	16255	.5834
SK503-4	76	.05	2.00	4.000	6.875	.1241	.0730	1180	1125	.025	----	----	15411	.5309
SK503-5	76	.05	2.00	4.000	7.000	.1253	.0680	1175	1135	.025	----	----	16691	.6112

TABLE H6. TENSILE TEST DATA

TEST MEASUREMENT DATA										TEST CALCULATIONS DATA				
TEST SPECIMEN NUMBER	TEST TEMP (°F)	LOAD RATE (IN./MIN.)	GAGE LENGTH (IN.)	SPECIMEN LENGTH		GAGE AREA		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	STRAIN RATE (IN./IN./MIN)	PERCENT ELASTIC ELONG. TO YIELD	PERCENT PLASTIC ELONG. TO RUPTURE	TRUE RUPTURE STRESS (LBS/IN. ²)	TRUE RUPTURE STRAIN (IN./IN.)
				BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)							
SK503-1	-30	10	2.25	4.469	5.000	.1297	.0732	1450	1085	4.44	----	----	14814	.5720
SK503-2	-30	10	2.25	4.406	4.531	.1285	.0780	1515	1135	4.44	----	----	14551	.4969
SK503-3	-30	10	2.25	4.469	4.750	.1301	.0769	1525	1170	4.44	----	----	15215	.5260
SK503-4	-30	10	2.25	4.422	4.844	.1275	.0764	1520	1140	4.44	----	----	14921	.5115
SK503-5	-30	10	2.25	4.500	4.750	.1288	.0792	1550	1160	4.44	----	----	14646	.4861
SK503-16	195	10	2.25	4.531	8.063	.1281	.0626	1045	800	4.44	----	----	12780	.7160
SK503-17	195	10	2.25	4.563	5.000	.1257	.0621	1020	658	4.44	----	----	10596	.7059
SK503-18	195	10	2.25	4.531	5.300	.1216	.0630	1000	660	4.44	----	----	10476	.6571
SK503-19	195	10	2.25	4.563	6.500	.1246	.0606	1000	660	4.44	----	----	10891	.7206
SK503-20	195	10	2.25	4.406	5.250	.1215	.0594	1000	660	4.44	----	----	11111	.7151
SW503-1	76	.050	2.00	4.000	6.438	.1252	.0722	1255	1085	.025	----	----	15028	.5507
SW503-2	76	.050	2.00	4.000	4.250	.1256	.0796	1255	945	.025	----	----	11872	.4555
SW503-3	76	.050	2.00	4.000	4.250	.1254	.0781	1250	910	.025	----	----	11652	.4745
SW503-4	76	.050	2.00	4.000	4.375	.1260	.0803	1260	915	.025	----	----	11395	.4529
SW503-5	76	.050	2.00	4.000	5.750	.1252	.0763	1250	940	.025	----	----	12320	.4950
SW503-1	76	10	2.00	4.250	4.813	.1106	.0618	1160	850	5.00	----	----	13754	.5820
SW503-2	76	10	2.00	4.250	4.656	.1171	.0647	1240	893	5.00	----	----	13802	.5933
SW503-3	76	10	2.00	4.250	4.438	.1110	.0673	1150	825	5.00	----	----	12259	.5004
SW503-4	76	10	2.00	4.250	5.125	.1133	.0609	1155	955	5.00	----	----	14039	.6208
SW503-5	76	10	2.00	4.250	4.656	.1201	.0657	1200	855	5.00	----	----	13014	.6032

TABLE H7. TENSILE TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA							TEST CALCULATIONS DATA				
	TEST TEMP (°F)	LOAD RATE (IN./MIN)	GAGE LENGTH (IN.)	SPECIMEN LENGTH		GAGE AREA		STRAIN RATE (IN./IN./MIN)	PERCENT ELONG. TO YIELD	PERCENT ELONG. TO RUPTURE	TRUE RUPTURE STRESS (LBS/IN. ²)	TRUE RUPTURE STRAIN (IN./IN.)
				BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)					
SMU503-6	-30	10	2.25	2.750	2.875	.1090	.0647	4.44	-	-	14065	.5216
-7	-30	10	2.25	2.750	3.000	.1110	.0949	4.44	-	-	15901	.2222
-8	-30	10	2.25	2.750	3.000	.1121	.0705	4.44	-	-	17457	.4638
-9	-30	10	2.25	2.750	3.750	.1116	.0653	4.44	-	-	14083	.5359
SMU503-11	195	10	2.25	2.750	3.125	.1091	.0561	4.44	-	-	9534	.6651
-12	195	10	2.25	2.750	4.219	.1158	.0581	4.44	-	-	10294	.6897
-13	195	10	2.25	2.750	4.344	.1094	.0535	4.44	-	-	10834	.7153
-14	195	10	2.25	2.750	5.750	.1167	.0593	4.44	-	-	11550	.6770
-15	195	10	2.25	2.750	5.688	.1118	.0556	4.44	-	-	10974	.6985
TEX503-7X	75	.050	2.00	4.000	5.812	.1287	.0748	.025	-	-	13463	.5427
-8X	75	.050	2.00	4.000	5.000	.1234	.0786	.025	-	-	11578	.4511
-9X	75	.050	2.00	4.000	4.125	.1273	.0781	.025	-	-	11332	.4886
-10X	75	.050	2.00	4.000	5.938	.1254	.0765	.025	-	-	12745	.4942
SK605-1	-30	10	2.25	4.563	4.859	.3741	.2245	4.44	-	-	17483	.5106
-2	-30	10	2.25	4.500	4.500	.3628	.3622	4.44	-	-	11458	.0017
-3	-30	10	2.25	4.500	5.616	.3672	.2912	4.44	-	-	16826	.3208
-4	-30	10	2.25	4.500	5.312	.3750	.2377	4.44	-	-	16720	.4559

TABLE H8. TENSILE TEST DATA

TEST SPECIMEN NUMBER		TEST MEASUREMENT DATA						TEST CALCULATIONS DATA							
		TEST TEMP (°F)	LOAD RATE (IN./MIN)	GAGE LENGTH (IN.)	SPECIMEN LENGTH		GAGE AREA	YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	STRAIN RATE (IN./IN./MIN)	PERCENT ELONG. TO YIELD	PERCENT ELONG. TO RUPTURE	TRUE RUPTURE STRESS (LBS/IN. ²)	TRUE RUPTURE STRAIN (IN./IN.)	
					BEFORE TEST (IN.)	AFTER TEST (IN.)									
SK605-10		195	10	2.25	4.500	4.875	.3699	.2135	3050	1875	4.44	-	-	8783	.5496
SK605-13		195	10	2.25	4.516	5.250	.3687	.1862	2900	1937	4.44	-	-	10404	.6832
SK605-15		195	10	2.25	4.500	7.625	.3725	.1811	2950	2050	4.44	-	-	11332	.7212
SHU605-6		75	10	2.25	4.500	6.375	.3388	.1864	3500	2675	4.44	-	-	14351	.5975
SHU605-7		75	10	2.25	4.500	6.063	.3421	.1921	3560	2690	4.44	-	-	14003	.5771
SHU605-8		75	10	2.25	4.500	6.438	.3310	.1824	3400	2620	4.44	-	-	14364	.5959
SHU605-9		75	10	2.25	4.500	5.188	.3371	.1962	3450	2525	4.44	-	-	12870	.5412
SHU605-10		75	10	2.25	4.500	6.125	.3292	.1832	3375	2550	4.44	-	-	13919	.5861
SHU605-1		-30	10	2.25	4.500	5.000	.3332	.2018	3835	3000	4.44	-	-	14864	.5015
SHU605-2		-30	10	2.25	4.500	4.875	.3313	.2014	4380	3375	4.44	-	-	16758	.4977
SHU605-3		-30	10	2.25	4.500	4.750	.3412	.2163	4530	3550	4.44	-	-	16411	.4558
SHU605-4		-30	10	2.25	4.500	5.000	.3406	.2062	4075	3150	4.44	-	-	15278	.5019
SHU605-5		-30	10	2.25	4.500	4.859	.3358	.2101	4325	3400	4.44	-	-	16181	.4689
SHU605-11		195	10	2.25	4.563	5.750	.3339	.1730	2325	1500	4.44	-	-	8671	.6575
SHU605-12		195	10	2.25	4.563	8.375	.3379	.1620	2375	1980	4.44	-	-	12220	.7352
SHU605-13		195	10	2.25	4.500	7.750	.3401	.1692	2380	1875	4.44	-	-	11080	.6982
SHU605-14		195	10	2.25	4.500	7.938	.3385	.1759	2480	2000	4.44	-	-	11370	.6546
SHU605-15		195	10	2.25	4.500	8.125	.3309	.2160	2350	1900	4.44	-	-	8797	.4265
SHU605-16		195	10	2.25	4.500	8.188	.3339	.1662	2500	2075	4.44	-	-	12488	.6976

TABLE H9. TENSILE TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA							TEST CALCULATIONS DATA						
	TEST TEMP (°F)	LOAD RATE (IN./MIN)	GAGE LENGTH (IN.)	SPECIMEN LENGTH		GAGE AREA		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	STRAIN RATE (IN./IN./MIN)	PERCENT ELONG. TO YIELD	PERCENT ELONG. TO RUPTURE	TRUE RUPTURE STRESS (LBS/IN. ²)	TRUE RUPTURE STRAIN (IN./IN.)
				BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)							
SWU605-6	75	10	2.25	4.563	6.000	.3401	.1915	3450	2600	4.44	-	-	13580	.5744
SWU605-7	75	10	2.25	4.563	6.688	.3385	.1931	3430	2700	4.44	-	-	13986	.5613
SWU605-8	75	10	2.25	4.500	5.875	.3360	.1875	3450	2550	4.44	-	-	13604	.5833
SWU605-9	75	10	2.25	4.500	6.063	.3182	.1919	3260	2525	4.44	-	-	13160	.5057
SWU605-10	75	10	2.25	4.500	6.250	.3218	.1778	3750	2520	4.44	-	-	14178	.5933
SWU605-11	-30	10	2.25	4.500	4.938	.3412	.2034	4090	3240	4.44	-	-	15931	.5173
SWU605-12	-30	10	2.25	4.500	4.813	.3345	.2069	4075	3175	4.44	-	-	15345	.4804
SWU605-13	-30	10	2.25	4.500	4.750	.3407	.4374	4850	3875	4.44	-	-	17614	.4374
SWU605-14	-30	10	2.25	4.500	4.813	.3337	.2074	4375	3500	4.44	-	-	16874	.4756
SWU605-15	-30	10	2.25	4.500	4.813	.3224	.2486	4750	3800	4.44	-	-	15287	.3223
SWU605 RH -11	195	10	2.25	4.500	7.250	.3352	.1712	2450	1788	4.44	-	-	10445	.6719
-12	195	10	2.25	4.500	8.313	.3256	.1610	2350	2100	4.44	-	-	13045	.7043
-13	195	10	2.25	4.500	8.563	.3256	.1562	2350	2060	4.44	-	-	13190	.7345
-14	195	10	2.25	4.500	7.875	.3176	.1611	2175	1775	4.44	-	-	11019	.6788
-15	195	10	2.25	4.500	8.000	.3230	.1604	2350	1900	4.44	-	-	11848	.7000
-16	195	10	2.25	4.500	8.250	.3265	.1608	2325	1975	4.44	-	-	12282	.7083
TEX571 RH -7	72	.050	2.00	4.563	6.625	.3584	.1996	3360	2660	.025	-	-	13327	.5935
-8	72	.050	2.00	4.563	7.125	.3599	.1971	3370	2820	.025	-	-	14307	.6021
-9	72	.050	2.00	4.563	7.375	.3539	.2027	3340	2940	.025	-	-	14503	.5578
-10	72	.050	2.00	4.563	7.375	.3333	.1864	3415	2250	.025	-	-	12071	.5812
-11	72	.050	2.00	4.500	7.250	.3365	.1935	3190	2720	.025	-	-	14057	.5533
-12	72	.050	2.00	4.563	6.563	.3340	.2211	3120	2420	.025	-	-	10945	.4125

TABLE H10. TENSILE TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA						TEST CALCULATIONS DATA				
	TEST TEMP (°F)	LOAD RATE (IN./MIN)	SPECIMEN LENGTH		GAGE AREA		STRAIN RATE (IN./IN./MIN)	PERCENT ELONG. TO YIELD	PERCENT ELONG. TO RUPTURE	TRUE RUPTURE STRESS (LBS/IN ²)	TRUE RUPTURE STRAIN (111/IN)
			BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)					
TEX605-7	75	10	2.25	4.469	6.750	.3298	.1880	3425	2800	4.44	.5620
TEX605-8	75	10	2.25	4.500	4.875	.3393	.2006	3540	2625	4.44	.5256
TEX605-9	75	10	2.25	4.500	6.250	.3317	.1872	3475	2675	4.44	.5721
TEX605-10	75	10	2.25	4.500	5.000	.3572	.2032	3700	2750	4.44	.5641
TEX605-11	75	10	2.25	4.500	6.188	.3289	.1888	3375	2600	4.44	.5551
TEX605-1	-30	10	2.25	4.500	5.250	.3270	.2073	3875	3050	4.44	.4558
TEX605-3	-30	10	2.25	4.438	4.500	.3397	.2179	5050	4075	4.44	.4358
TEX605-4	-30	10	2.25	4.500	5.375	.3272	.2017	3900	3110	4.44	.4838
TEX605-5	-30	10	2.25	4.500	4.750	.3151	.1980	5075	4115	4.44	.4646
TEX605-6	-30	10	2.25	4.438	4.625	.3223	.2165	4625	3730	4.44	.3979
TEX605-13	195	10	2.25	4.500	8.188	.3572	.1806	2730	2350	4.44	.6820
TEX605-14	195	10	2.25	4.500	7.813	.3314	.1667	2500	2060	4.44	.6071
TEX605-15	195	10	2.25	4.500	5.250	.3380	.1846	2560	1675	4.44	.6049
TEX605-16	195	10	2.25	4.500	5.313	.3610	.1986	2725	1795	4.44	.5976
TEX605-17	195	10	2.25	4.500	7.250	.3277	.1808	2460	1800	4.44	.5947
TEX605-18	195	10	2.25	4.500	6.750	.3082	.1824	2780	1803	4.44	.7808
TEX605X-19	72	10	2.25	4.500	5.750	.3184	.1796	3550	2660	4.44	.5726
TEX605X-20	72	10	2.25	4.469	6.219	.3417	.1944	3750	2850	4.44	.5640
TEX605X-21	72	10	2.25	4.500	5.250	.3210	.1863	3570	2660	4.44	.5441
TEX605X-22	72	10	2.25	4.500	6.094	.3247	.1875	3610	2675	4.44	.5491
TEX605X-23	72	10	2.25	4.500	6.375	.3368	.1889	3700	2770	4.44	.5783
TEX605X-24	72	10	2.25	4.500	4.375	.2973	.1868	3300	2425	4.44	.4647

APPENDIX J
LOW STRAIN RATE COMPRESSION
TEST DATA
(SECTION VI, PART 1)

AD-A064 797

DOUGLAS AIRCRAFT CO LONG BEACH CALIF
TESTING FOR MECHANICAL PROPERTIES OF MONOLITHIC AND LAMINATED P--ETC(U)
OCT 78 F E GREENE

F/G 11/9

F33615-75-C-3105

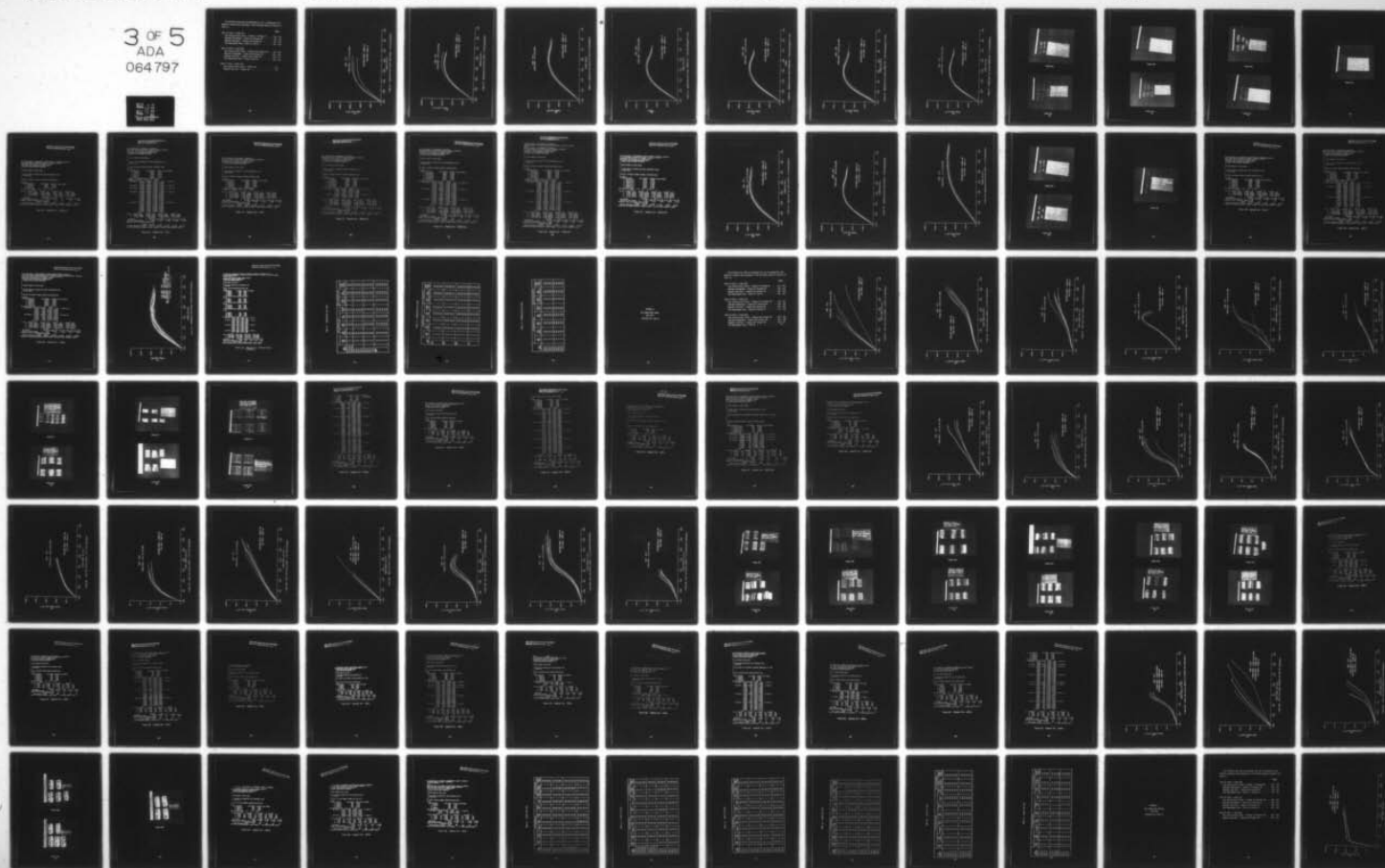
UNCLASSIFIED

MDC-J6950

AFFDL-TR-77-96-PT-2

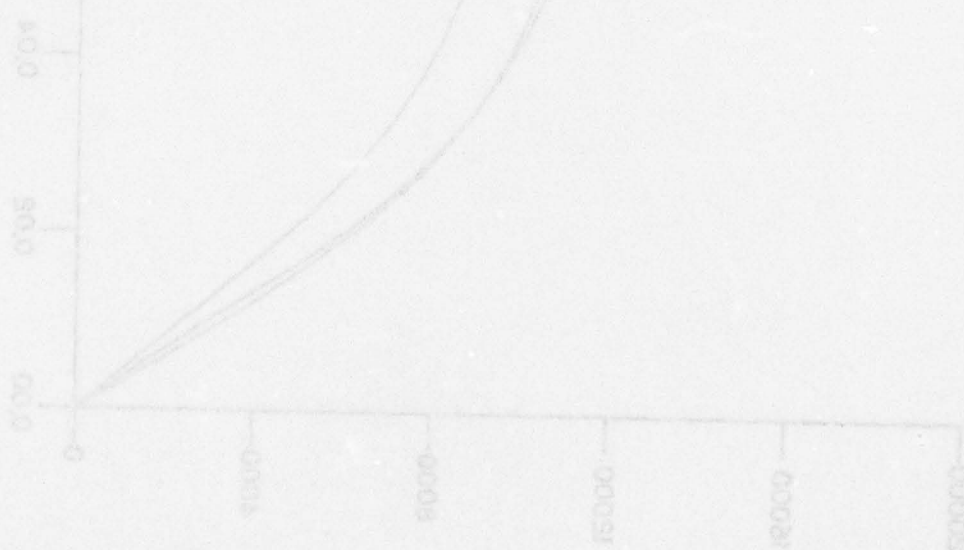
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3 OF 5
ADA
064 797



The following test data are presented for use in conjunction with material property data presented in the following tables of Section VI (Part 1).

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Computer Data Run - Figure J32.	213



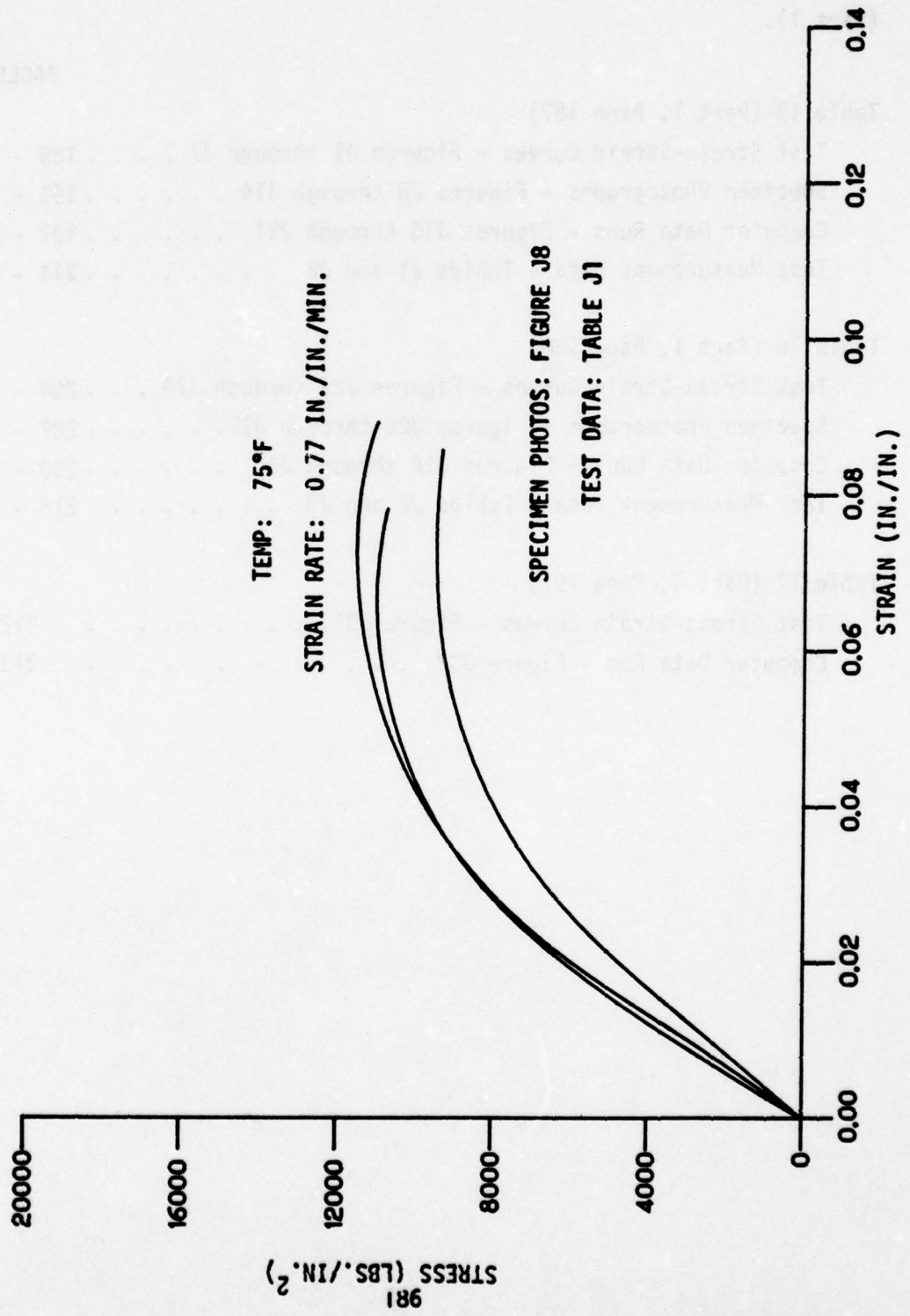


Figure J1. Compression Test Curves (PPG-515/26 - 0.19 Polycarbonate)

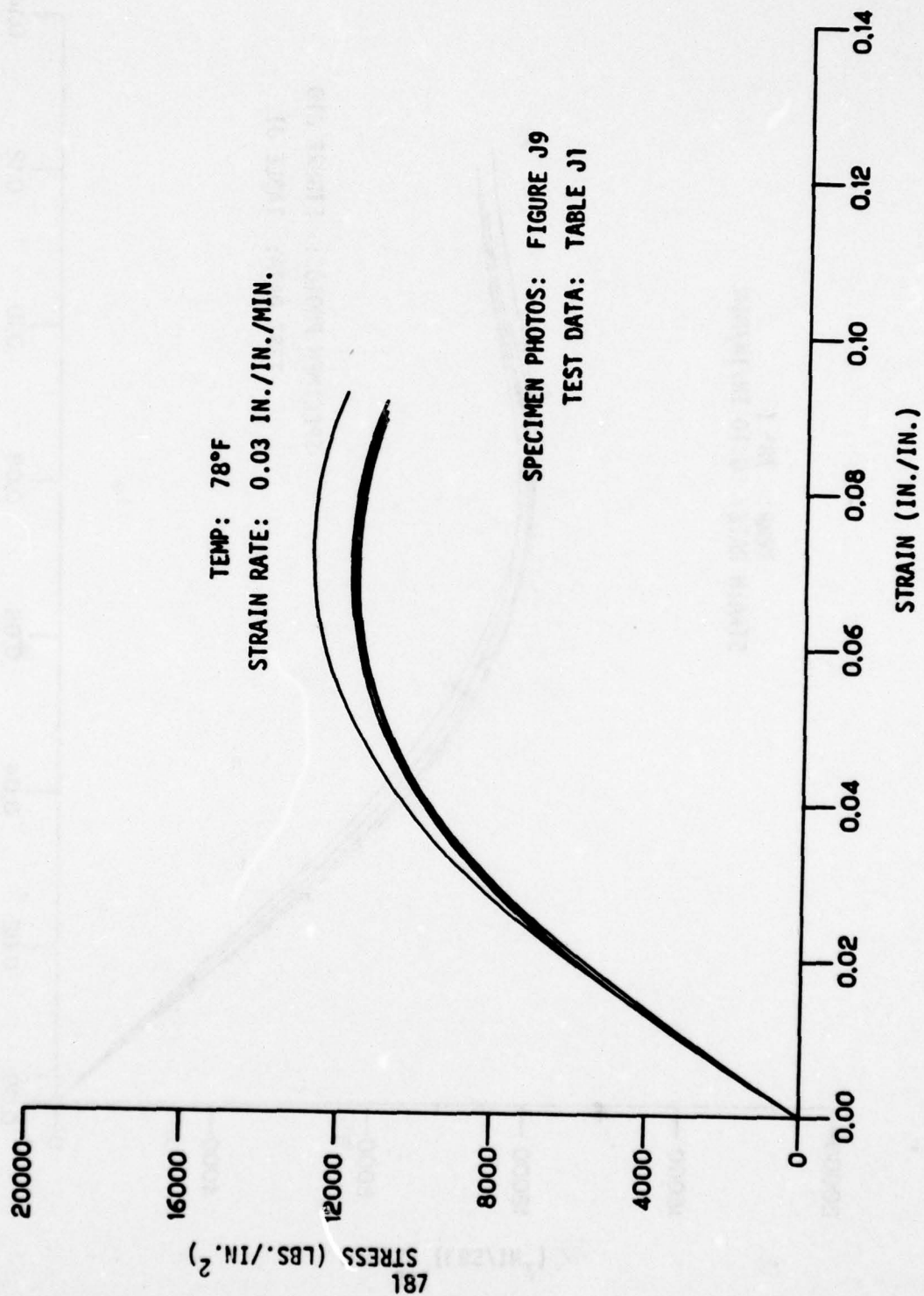


Figure J2. Compression Test Curves (SK511 - 0.50 Polycarbonate)

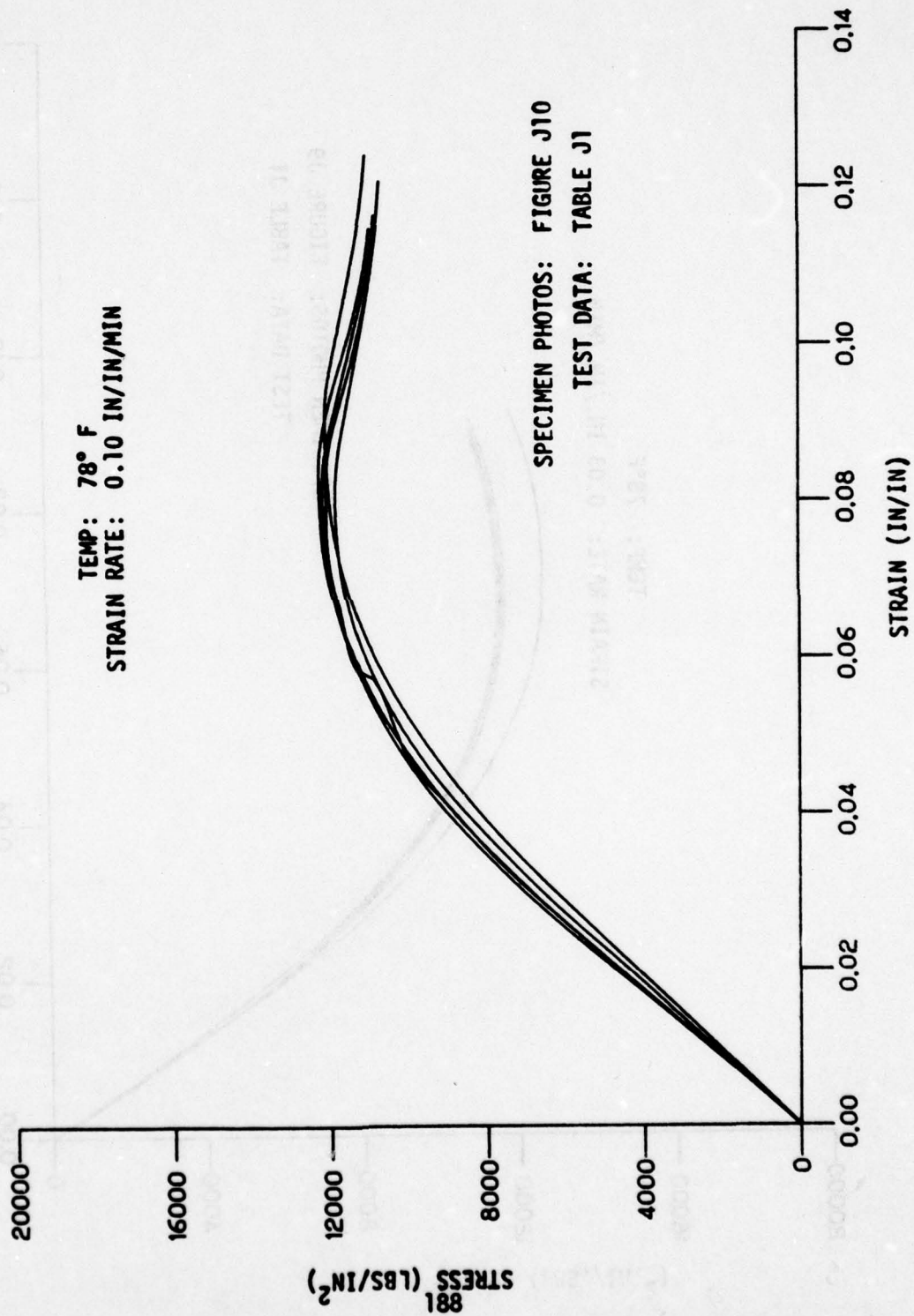


FIGURE J3. Compression Test Curves (SK 513-0.15 Polycarbonate)

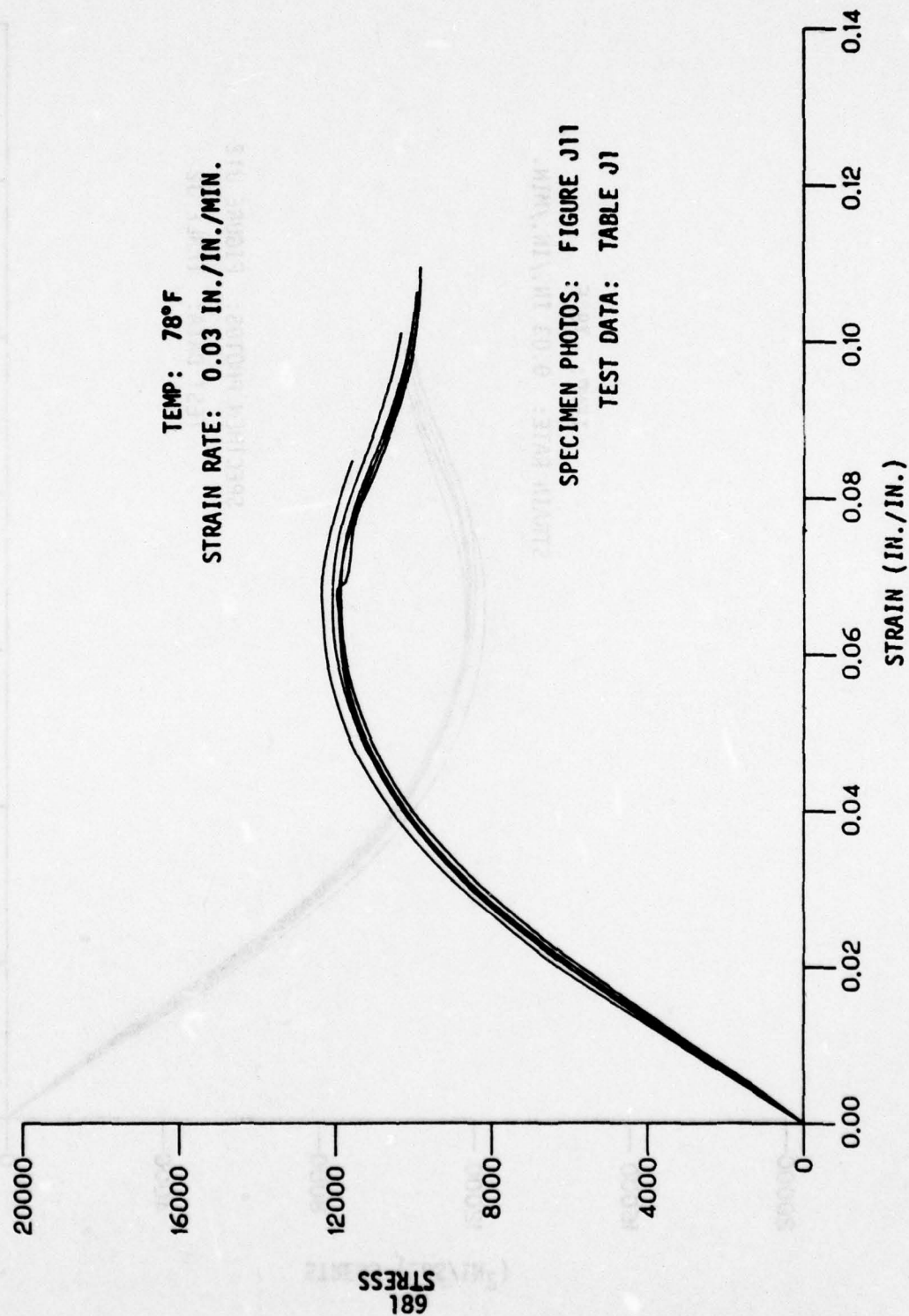


Figure J4. Compression Test Curves (SMU545-107 - 0.500 Polycarbonate B-1 W/S).

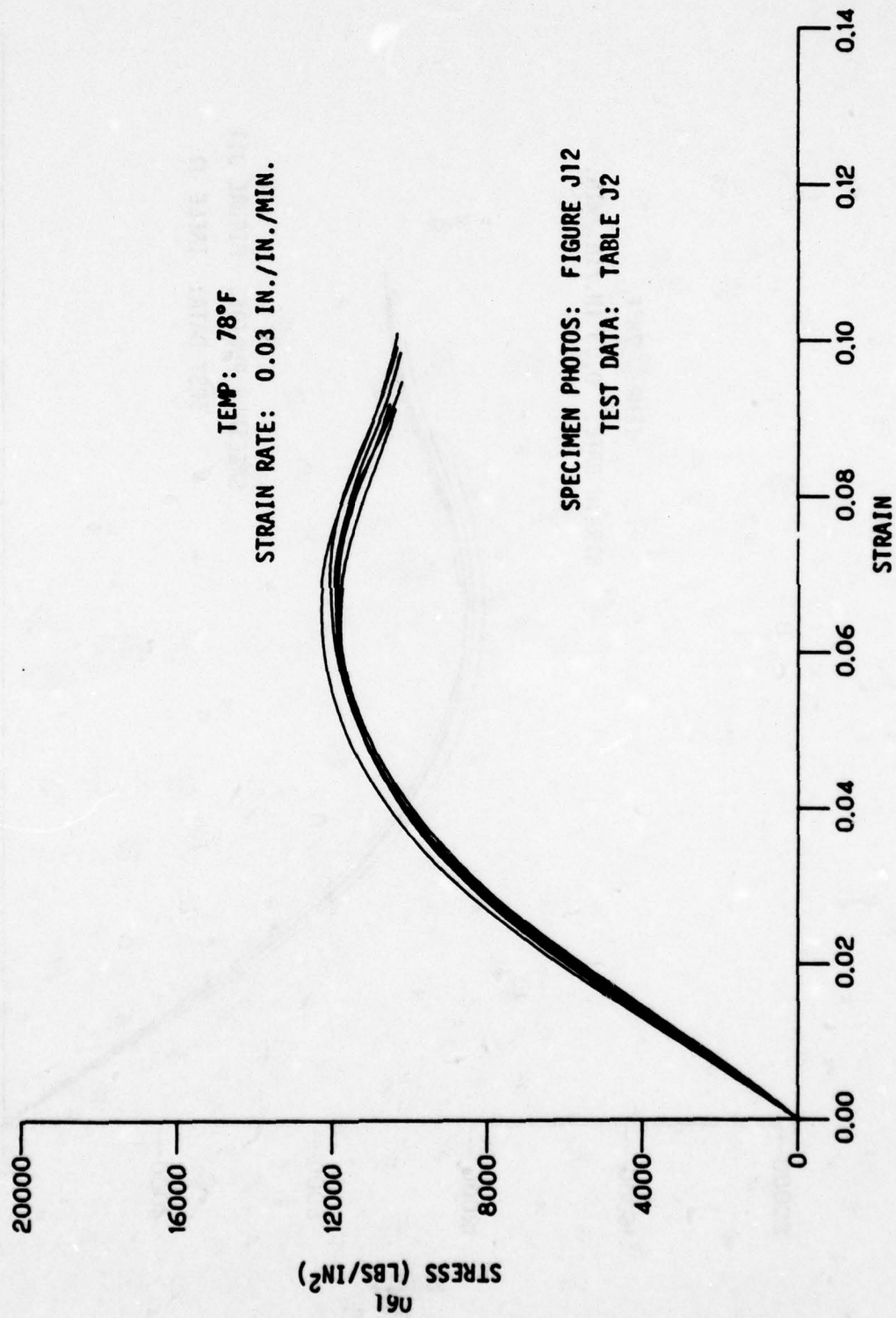


Figure J5. Compression Test Curves (SMU545-108 - 0.500 Polycarbonate B-1 W/S)

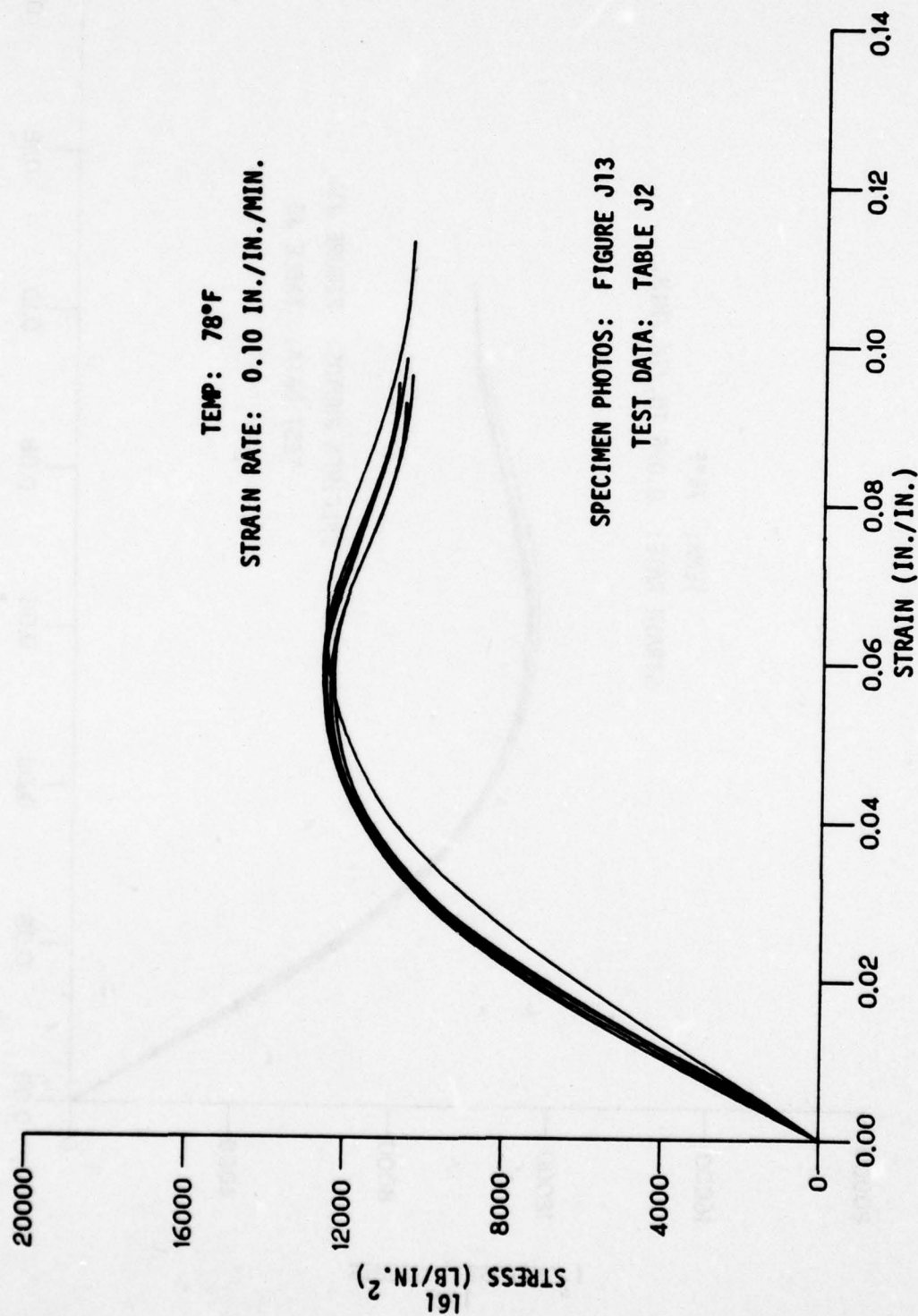


Figure J6. Compression Test Curves (SWU547-107 - 0.150 Polycarbonate B-1 W/S).

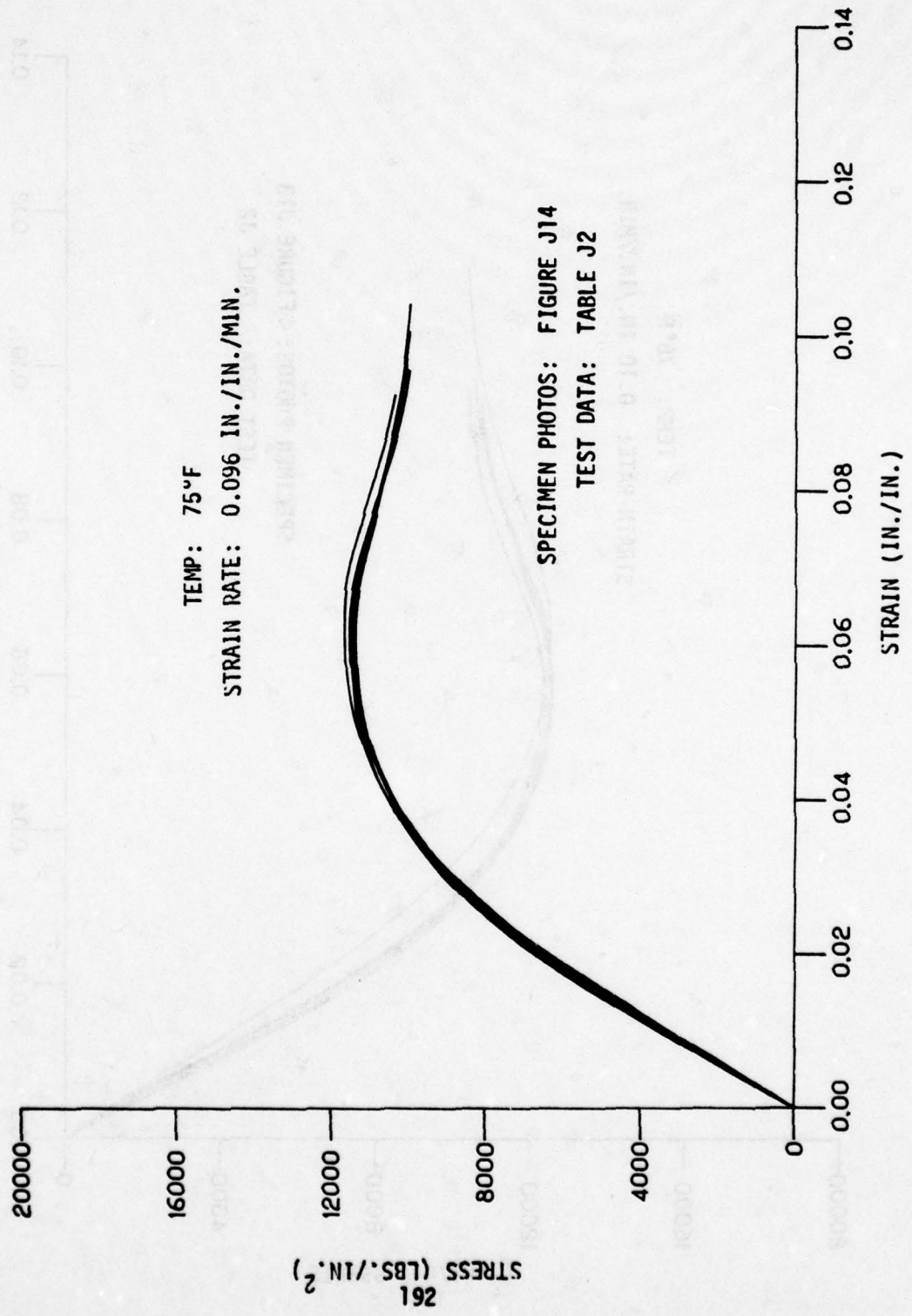


Figure J7. Compression Test Curves (SMJ547/108 - 0.15 Polycarbonate)

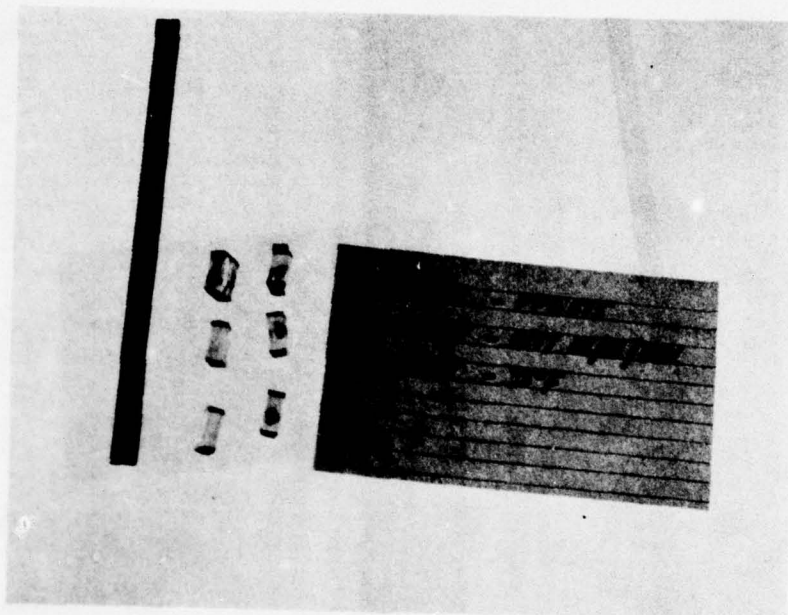


Figure J8.

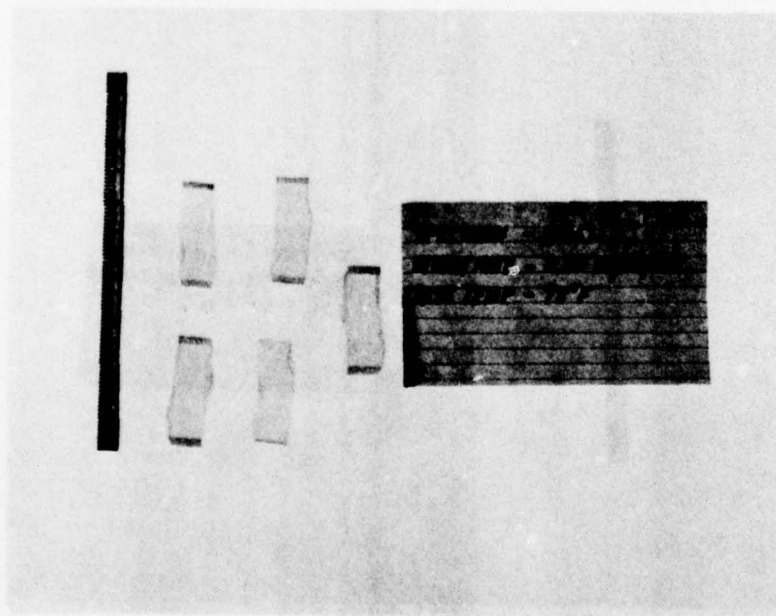


Figure J9.

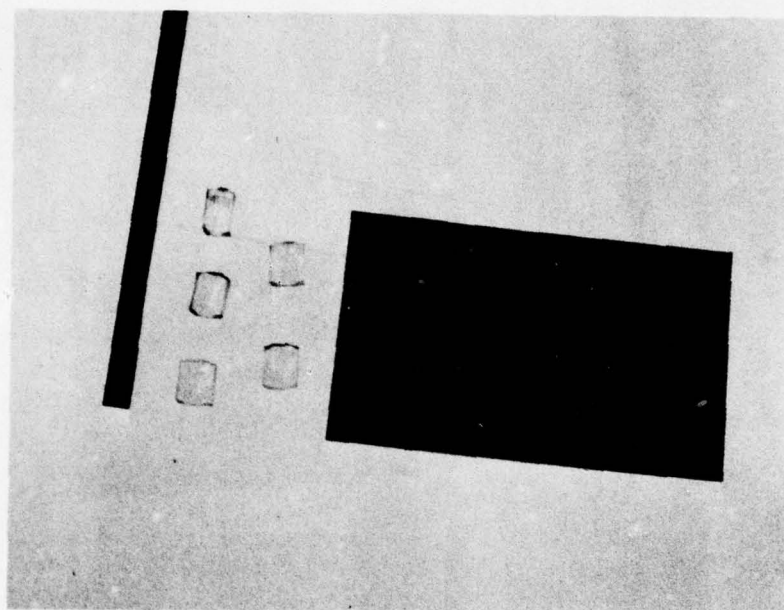


Figure J10.

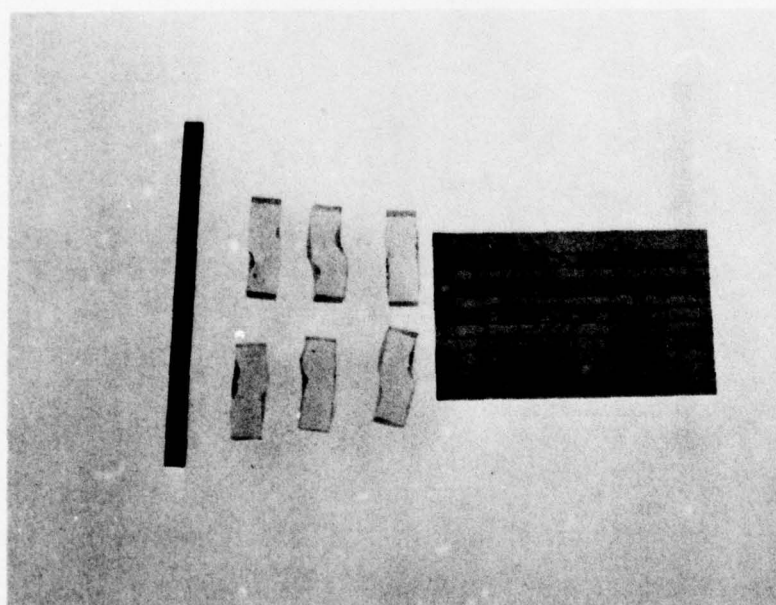


Figure J11.

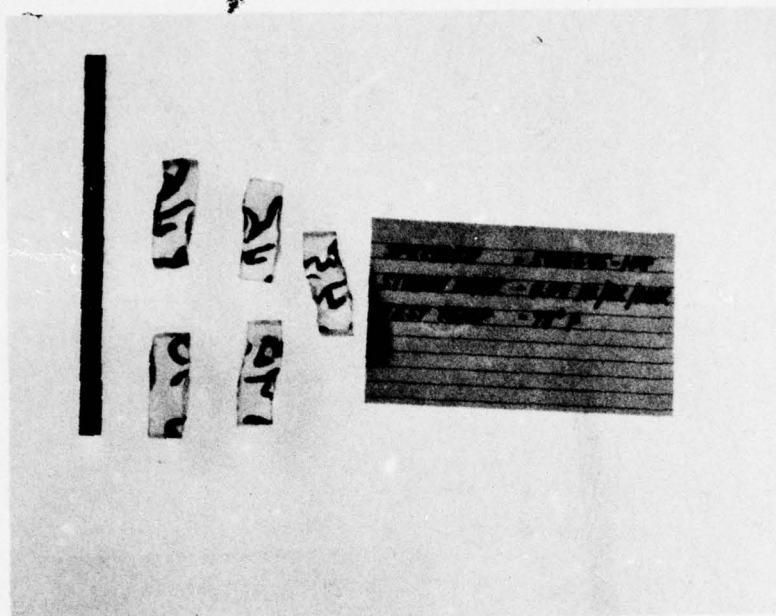


Figure J12.

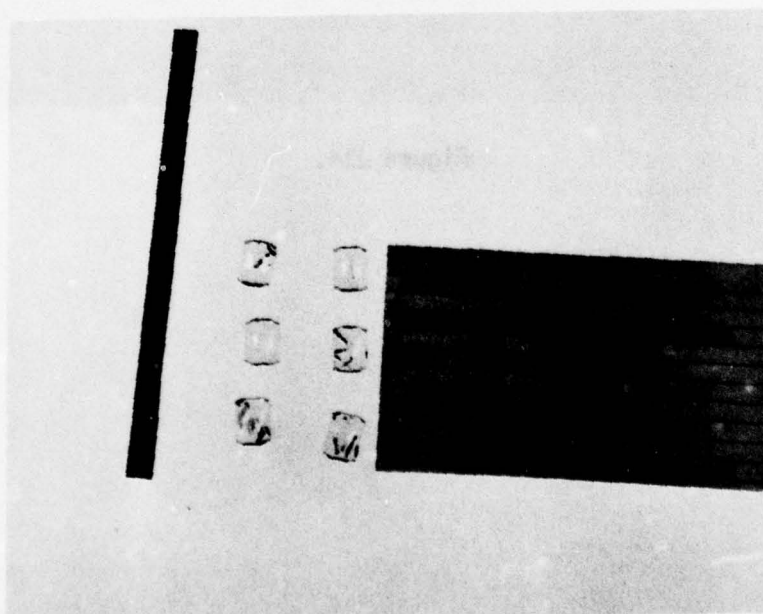


Figure J13.
195

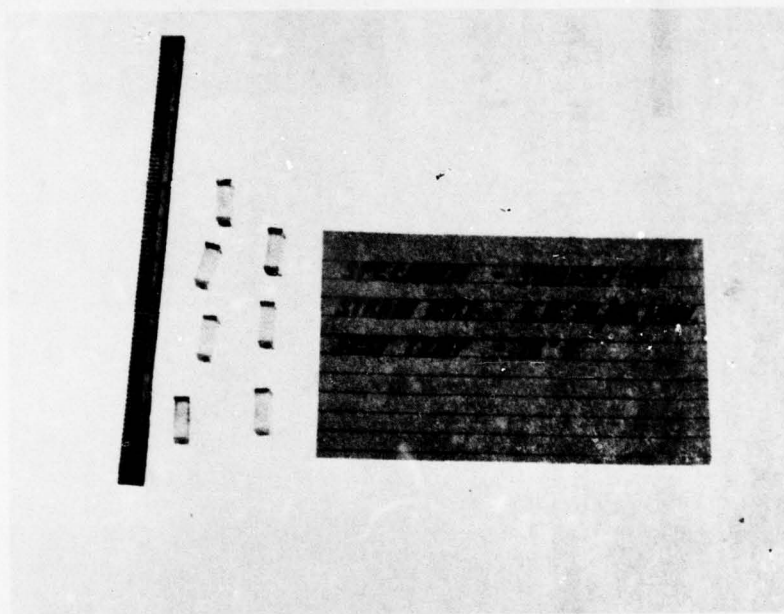


Figure J14.

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ex clst(stsstr) 'd1(ppg51501) g(e77623.d0211.feg004) l(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 ****
TEKSSC,CHG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
  SHEAR=1,COMP=2,SHORT TENSION=2
?
2
  ENTER NUMBER OF DATA FILES
?
1
  DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
  (1=YES,2=NO)
?
2
  X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
  TEST SPECIMENS-      MAX STRESS  STRAIN AT MAX STRESS
    1 PPG515-1          11498.    0.073
    2 PPG515-2          10984.    0.066
    3 PPG515-3           9449.    0.073
MAX STRAIN ON CURVE  1 OF 3= 0.089
      AVG      A      B      C
PC NO.  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC
    2  0.017 284922.  0.017-149391.  0.017 31611.  0.017 128285.
    4   0.034 246900.  0.034 -54002.  0.034 71400.  0.034 138378.
    6   0.064 164511.  0.064 -9735.  0.064 62882.  0.064 101668.
      STD DEV      AVG      A      B      C
MAX STRESS      = 1066.202 10639.772  0.0 3477.967 6353.898
STRAIN AT MAX STRESS = 0.004 0.071  0.0 0.047 0.056
STRAIN AT 2ND PT ON BASE CURVE= 0.012
      STRAIN  STD DEV      AVG      A      B      C
ELASTIC MODULUS AT 0.012 39661. 285917. -94805. 63862. 148607.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 286128. DELTA STRAIN= 0.0001

```

Figure J15. Computer Run - PPG515/26.

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ex clst(stsstr) 'a1(sk51101) 1(tekssc):
**** LOAD MODULE RELOCATION FACTOR = 0AF560 *****
TEKSSC,CAG 20,10-13-77; J.F.EURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=2

?
2
? ENTER NUMBER OF DATA FILES
?
1
? DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
? (1=YLS,2=NO)
2

? K-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?

.31 1000

TEST SPECIMENS-	MAX STRESS	STRAIN AT MAX STRESS
1 SK511-1	12715.	0.072
2 SK511-2	11567.	0.070
3 SK511-3	11730.	0.070
4 SK511-4	11642.	0.070
5 SK511-5	11548.	0.069

STRAIN AT FRACTURE POINT IS NOT NORMAL
MAX STRAIN ON CURVE 1 OF 5= 0.092

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	
	0.0135	4138.	0.3370	0.3828	1 1.000 0.0
	0.0163	4945.	0.3370	0.4471	
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	2 1.000 0.0
	0.0163	4945.	0.3370	0.4471	
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	3 1.000 0.0
	0.0460	10599.	0.3370	0.3436	
	0.0497	10941.	0.3370	0.3584	
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	4 1.000 0.0
	0.0497	10941.	0.3370	0.3584	
	0.0515	11082.	0.3370	0.3665	
	0.0533	11212.	0.3370	0.3745	
	0.0553	11330.	0.3370	0.3818	
	0.0573	11436.	0.3370	0.3872	
	0.0595	11528.	0.3370	0.3903	
	0.0617	11606.	0.3370	0.3909	
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	5 1.000 0.0
	0.0617	11606.	0.3370	0.3909	
	0.0634	11652.	0.3370	0.3904	
	0.0651	11688.	0.3370	0.3895	
	0.0669	11713.	0.3370	0.3885	
	0.0686	11727.	0.3370	0.3877	
	0.0704	11730.	0.3370	0.3880	
	0.0722	11730.	0.3370	0.3884	

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.032	270051.	0.032	231019.	0.032	246888.	0.032	255434.
4	0.062	189729.	0.062	147669.	0.062	164768.	0.062	173977.

	AVG	A	B	C
MAX STRESS	= 494.284	11840.948	9121.268	10193.188
STRAIN AT MAX STRESS	= 0.001	0.070	0.058	0.065
STRAIN AT 2ND PT ON BASE CURVE=	0.016			

	STRAIN	STD DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.016	11111.	277315.	250087.	261157.	267118.	
CHECK ON CALC-MEAN MODULUS ON TEST CURVES=	278098.	DELTA STRAIN=	0.0002			

Figure J16. Computer Run - SK511.

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ex clst(stsstr) 'd1(sk51301) 1(tekssc)*
**** LOAD MODULE RELOCATION FACTOR = 0AF560 *****
TEKSSC,CHG 20,13-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
  SHEAR=1,COMP=2,SHORT TENSION=2
?
2
  ENTER NUMBER OF DATA FILES
?
1
  DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
  (1=YES,2=NO)
?
2
  X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
  TEST SPECIMENS-      MAX STRESS    STRAIN AT MAX STRESS
    1 SK513-1          11813.      0.080
    2 SK513-2          12045.      0.083
    3 SK513-3          12143.      0.081
    4 SK513-4          12074.      0.090
    5 SK513-5          12236.      0.083
  STRAIN AT FRACTURE POINT IS NOT NORMAL
  MAX STRAIN ON CURVE  4 OF  5=    0.124
      AVG      A      B      C
PC NO.  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC
    2    0.017 224526.  0.017 159909.  0.017 186179.  0.017 200327.
    4    0.035 221113.  0.035 168202.  0.035 189713.  0.035 201298.
    6    0.050 202532.  0.050 169161.  0.050 182728.  0.050 190034.
    8    0.064 180030.  0.064 160239.  0.064 163305.  0.064 172549.
      STD DEV      AVG      A      B      C
  MAX STRESS      =  157.674 12052.394  9815.811 11162.333 11601.855
  STRAIN AT MAX STRESS =    0.004    0.083    0.061    0.070    0.075
  STRAIN AT 2ND PT ON BASE CURVE= 0.001
      STRAIN  STD DEV      AVG      A      B      C
  ELASTIC MODULUS AT 0.001  10550.  223417.  16424T.  188299.  201256.
  CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 223475. DELTA STRAIN= 0.0003

```

Figure J17. Computer Run - SK513.

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ex clst(stsstr) 'd1(swu54501) 1(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 ****
TEKSSC,CHG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,CC4P=2,SHORT TENSION=2
?
2
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
1  SWU7-545-1          12349.        0.068
2  SWU7-545-2          11915.        0.066
3  SWU7-545-3          11861.        0.067
4  SWU7-545-4          11835.        0.067
5  SWU7-545-5          12074.        0.066
6  SWU7-545-6          11957.        0.068
MAX STRAIN ON CURVE 4 OF 6= 0.109
NOT NORMAL STRAIN SSTRESS DCRIT DCAC 17 1.000 0.0
0.0640 11908. 0.3190 0.3229
0.0646 11911. 0.3190 0.3302
0.0651 11914. 0.3190 0.3374
NOT NORMAL STRAIN SSTRESS DCRIT DCAC 18 1.000 0.0
0.0651 11914. 0.3190 0.3374
0.0656 11924. 0.3190 0.3243
AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.005 299584. 0.005 211517. 0.005 247285. 0.005 266515.
4 0.013 301231. 0.013 244461. 0.013 267519. 0.013 279979.
6 0.022 296306. 0.022 252527. 0.022 270308. 0.022 279917.
8 0.031 260225. 0.031 249417. 0.031 261930. 0.031 268692.
STD DEV AVG A B C
MAX STRESS = 183.549 12005.384 11039.418 11443.168 11653.400
STRAIN AT MAX STRESS = 0.001 0.067 0.063 0.065 0.066
STRAIN AT 2ND PT ON BASE CURVE= 0.000
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.000 24842. 293364. 171573. 223071. 250899.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 293091. DELTA STRAIN= 0.0001

```

Figure J18. Computer Run - SWU545/107.

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```
ex clst(stsstr) 'd1(sw854501) 1(tekssc)
**** LOAD MODULE RELOCATION FACTOR = 0AF560 *****
TEKSSC,CHG 20,10-13-77; J.F.BURKE X375**
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=2
```

```
?
2
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES,2=NO)
```

```
?
2
A-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
```

```
.01 1000
```

TEST SPECIMENS-	MAX STRESS	STRAIN AT MAX STRESS
1 SWU8-545-1	11897.	0.069
2 SWU8-545-2	12266.	0.066
3 SWU8-545-3	11827.	0.067
4 SWU8-545-4	11869.	0.067
5 SWU8-545-5	12031.	0.069
6 SWU8545 -6	11774.	0.064

MAX STRAIN ON CURVE 2 OF 6= 0.101

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	9 1.000 0.0
	0.0442	10687.	0.3190	0.3327	
	0.0453	10813.	0.3190	0.3457	
	0.0465	10935.	0.3190	0.3579	
	0.0477	11053.	0.3190	0.3705	
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	10 1.000 0.0
	0.0477	11053.	0.3190	0.3705	
	0.0487	11144.	0.3190	0.3816	
	0.0498	11230.	0.3190	0.3939	
	0.0508	11312.	0.3190	0.4076	
	0.0519	11401.	0.3190	0.3973	
	0.0530	11487.	0.3190	0.3839	
	0.0542	11568.	0.3190	0.3589	
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	11 1.000 0.0
	0.0542	11568.	0.3190	0.3589	
	0.0552	11630.	0.3190	0.3555	
	0.0561	11688.	0.3190	0.3408	
	0.0571	11742.	0.3190	0.3246	

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.005	275460.	0.005	187299.	0.005	223107.	0.006	242456.
4	0.017	263996.	0.017	231675.	0.017	254957.	0.017	267537.
6	0.027	281610.	0.027	243226.	0.027	258916.	0.027	267241.
8	0.041	250528.	0.041	225916.	0.041	235853.	0.041	241277.

	STD DEV	AVG	A	B	C	
MAX STRESS	=	179.890	11942.079	10869.705	11351.995	11530.283
STRAIN AT MAX STRESS	=	0.002	0.057	0.058	0.062	0.064
STRAIN AT 2ND PT ON BASE CURVE	=	0.000				
	STRAIN	STD DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.000		19700.	261968.	152824.	197154.	221109.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES	=	263514.	DELTA STRAIN=	0.0001		

Figure J19. Computer Run - SWU545/108.

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ex clst(stsstr) 'd1(swu54701) 1(tekssc)'
IKJ56225I DATA SET TSOT2JC.GREEN.DATA ALREADY IN USE, TRY LATER+
READY

ex clst(stsstr) 'd1(swu54701) 1(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 *****

TEKSSC,CHG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.

SHEAR=1,COMP=2,SHORT TENSION=2

?

2

ENTER NUMBER OF DATA FILES

?

1

DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES,2=NO)

?

2

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

?

.01 1000

TEST SPECIMENS-

	MAX STRESS	STRAIN AT MAX STRESS
1 SWU7-547-1	12513.	0.064
2 SWU7-547-2	12525.	0.059
3 SWU7-547-3	12298.	0.058
4 SWU7-547-4	12550.	0.059
5 SWU7-547-5	12512.	0.059
6 SWU7-547-6	12337.	0.056

STRAIN AT FRACTURE POINT IS NOT NORMAL

MAX STRAIN ON CURVE 1 OF 6= 0.113

NOT NORMAL STRAIN SSTRESS DCRIT DCAC 6 1.000 0.0

STRAIN	SSTRESS	DCRIT	DCAC
0.0234	8015.	0.3190	0.3265
0.0244	8298.	0.3190	0.3381
0.0253	8577.	0.3190	0.3491
0.0263	8850.	0.3190	0.3581
0.0274	9115.	0.3190	0.3641
0.0284	9371.	0.3190	0.3668

NOT NORMAL STRAIN SSTRESS DCRIT DCAC 7 1.000 0.0

STRAIN	SSTRESS	DCRIT	DCAC
0.0284	9371.	0.3190	0.3668
0.0295	9610.	0.3190	0.3657
0.0305	9841.	0.3190	0.3547
0.0316	10054.	0.3190	0.3619
0.0328	10281.	0.3190	0.3595
0.0339	10490.	0.3190	0.3549
0.0351	10693.	0.3190	0.3509

NOT NORMAL STRAIN SSTRESS DCRIT DCAC 8 1.000 0.0

STRAIN	SSTRESS	DCRIT	DCAC
0.0351	10693.	0.3190	0.3508
0.0360	10839.	0.3190	0.3472
0.0370	10979.	0.3190	0.3428
0.0379	11117.	0.3190	0.3375
0.0389	11253.	0.3190	0.3316
0.0400	11386.	0.3190	0.3253

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.007	345672.	0.007	157581.	0.007	234442.	0.007	275922.
4	0.018	353195.	0.018	230483.	0.018	280324.	0.018	307257.
6	0.028	323574.	0.028	249755.	0.028	231175.	0.028	298693.
8	0.041	280115.	0.041	245730.	0.041	259749.	0.041	267324.

	STD DEV	AVG	A	B	C
MAX STRESS	= 109.059	12453.090	10835.209	11816.506	12152.723
STRAIN AT MAX STRESS	= 0.003	0.059	0.046	0.051	0.054

STRAIN AT 2ND PT ON BASE CURVE= 0.000

	STRAIN	STD DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.000	61320.	334715.	21177.	148525.	217340.	
CHECK ON CALC-MEAN MODULUS ON TEST CURVES=	334708.	DELTA STRAIN=	0.0001			

Figure J20. Computer Run - SWU547/107.

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ex clst(stastr) 'd1(sw054701) g(e77623.d0211.feg020) l(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 085560 *****
TEKSSC,CNG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
  SHEAR=1,COMP=2,SHORT TENSION=2
?
2
  ENTER NUMBER OF DATA FILES
?
1
  DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
  (1=YES,2=NO)
?
2
  X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
  TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
    1 SWU8-547-1      11492.      0.061
    2 SWU8-547-2      11531.      0.062
    3 SWU8-547-3      11416.      0.062
    4 SWU8-447-5      11433.      0.062
    5 SWU8-547-5      11374.      0.062
    6 SWU8-547-6      11500.      0.062
    7 SWU8-547-7      11661.      0.064
MAX STRAIN ON CURVE 1 OF 7= 0.104
      AVG      A      B      C
PC NO.  STRAIN SEC  STRAIN SEC  STRAIN SEC  STRAIN SEC
    2  0.005 339811.  0.005 268165.  0.005 297289.  0.005 313079.
    4  0.015 332613.  0.015 284967.  0.015 304335.  0.015 314836.
    6  0.026 310616.  0.026 291126.  0.026 299049.  0.026 303344.
    8  0.037 271642.  0.037 260427.  0.037 264986.  0.037 267457.
      STD DEV      AVG      A      B      C
MAX STRESS      = 94.198 11486.212 11038.626 11224.038 11322.770
STRAIN AT MAX STRESS = 0.001 0.062 0.058 0.060 0.061
STRAIN AT 2ND PT ON BASE CURVE= 0.000
      STRAIN STD DEV      AVG      A      B      C
ELASTIC MODULUS AT 0.000 31433. 355576. 214889. 272079. 303084.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 355553. DELTA STRAIN= 0.0001

```

Figure J21. Computer Run - SWU547/108.

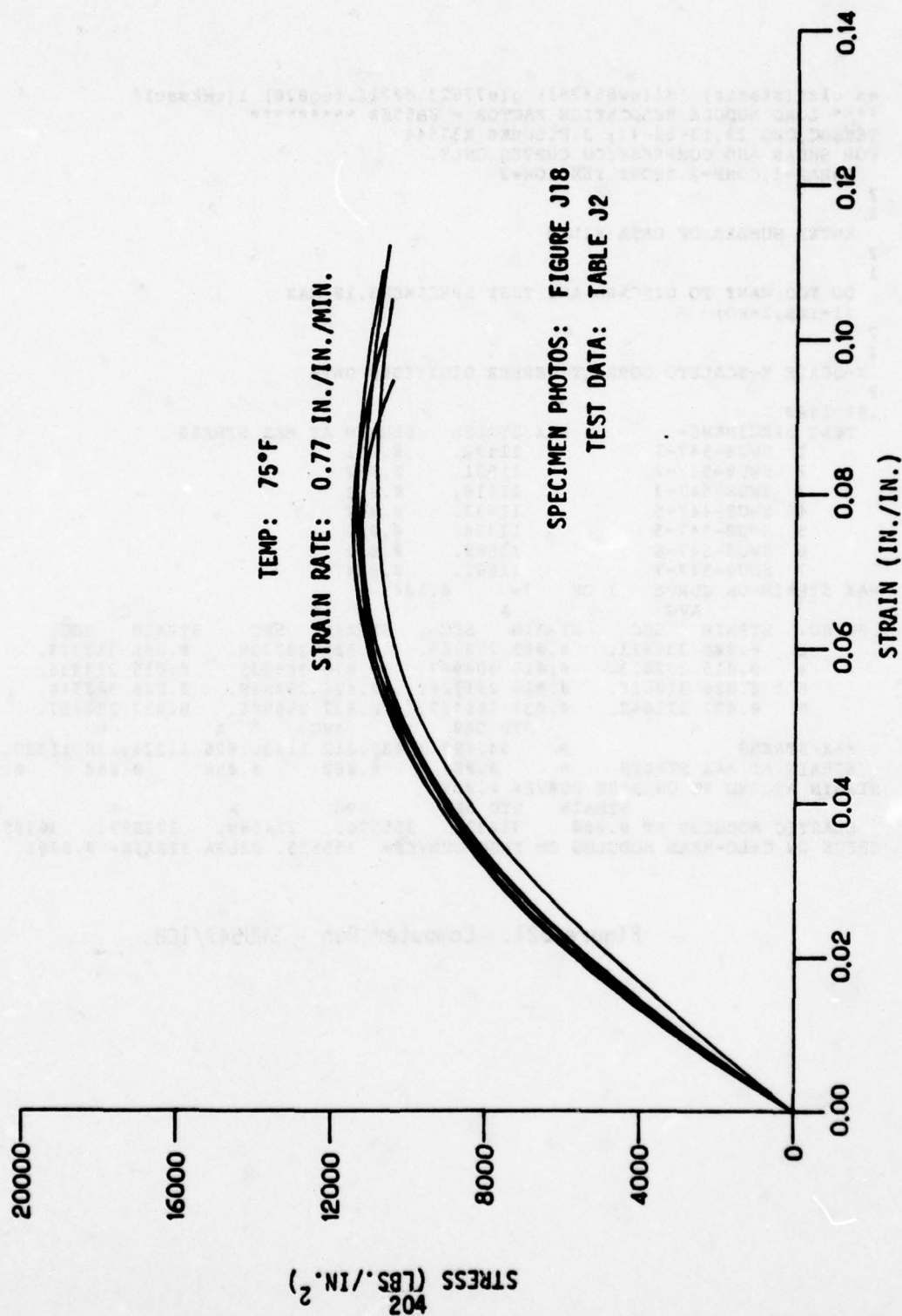


Figure J22. Compression Test Curves (PPG515 - 0.19 Polycarbonate)

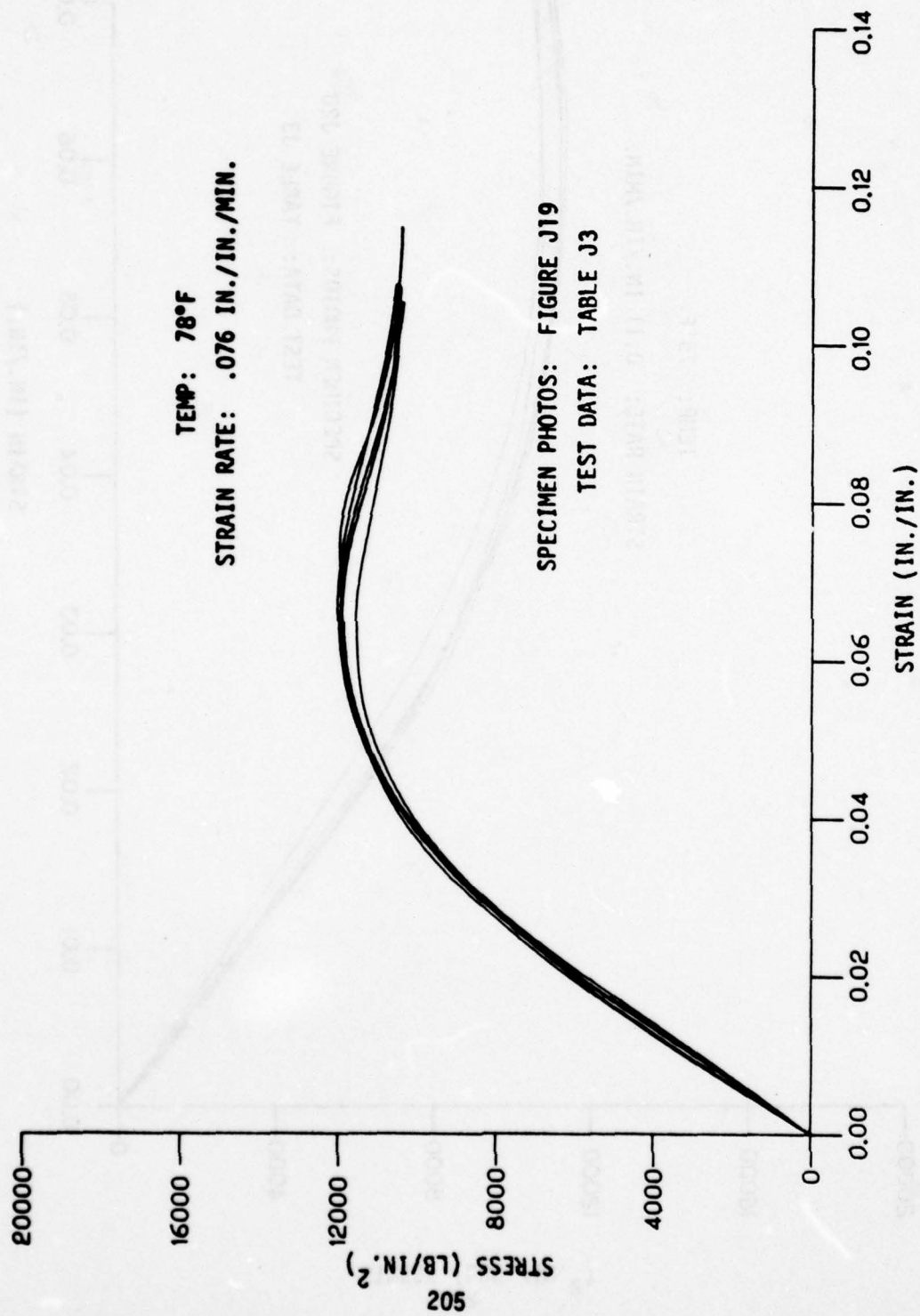


Figure J23. Compression Test Curves (SWU515 - 0.188 Polycarbonate).

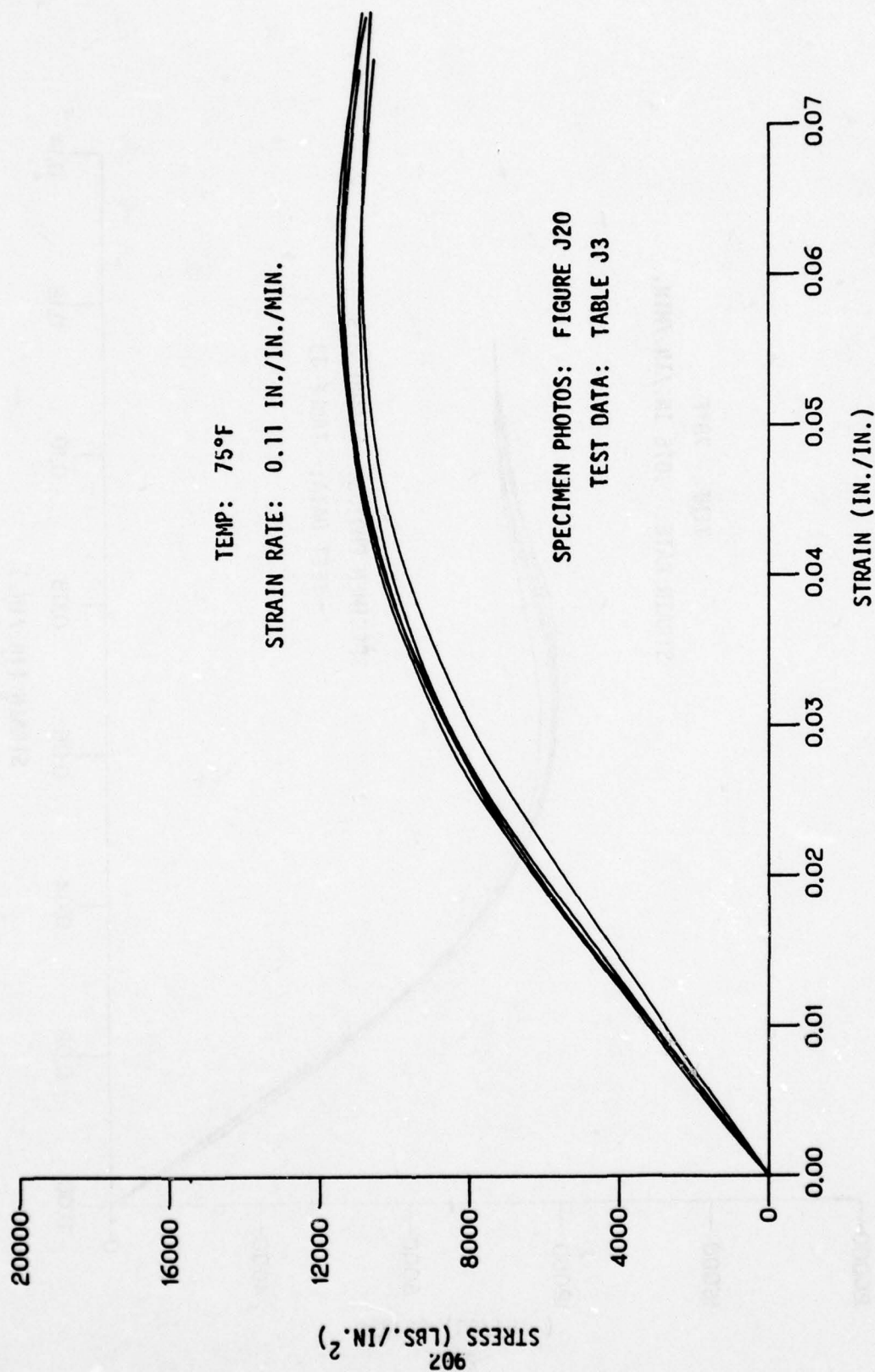


Figure J24. Compression Test Curves (TEX527 - 0.25 Polycarbonate)

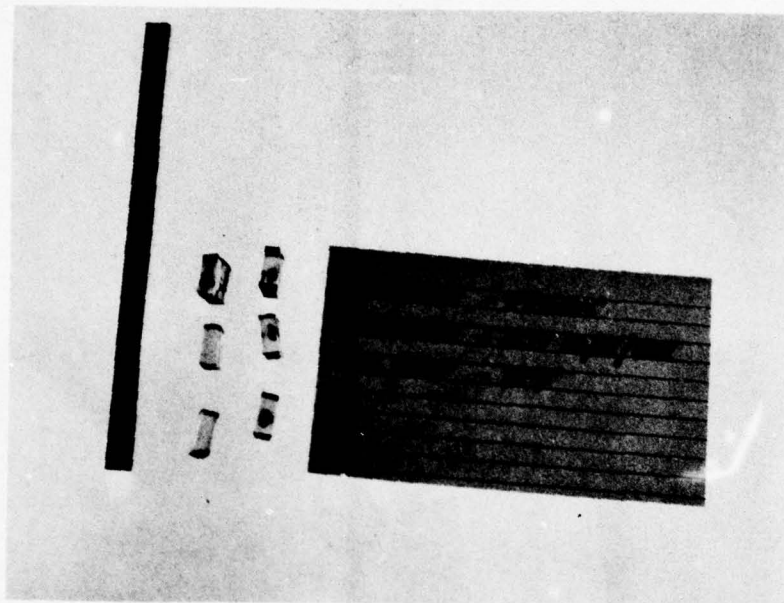


Figure J25.

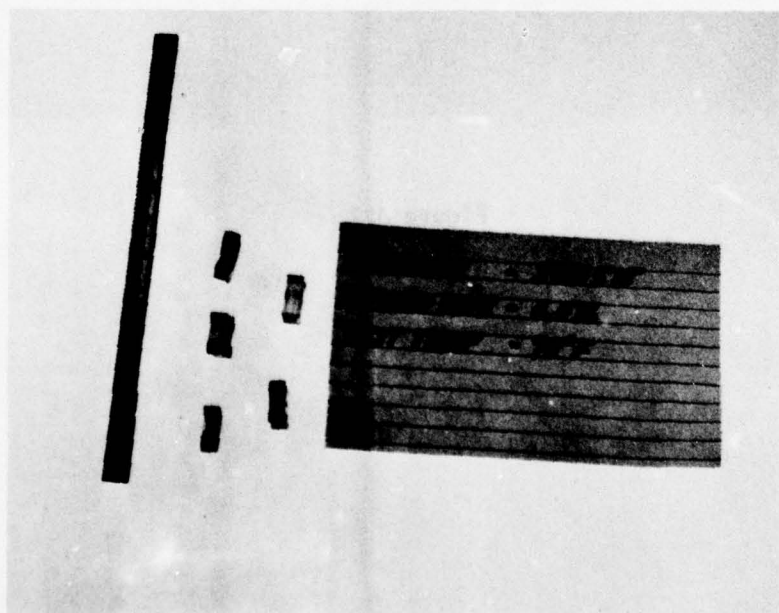


Figure J26.
207

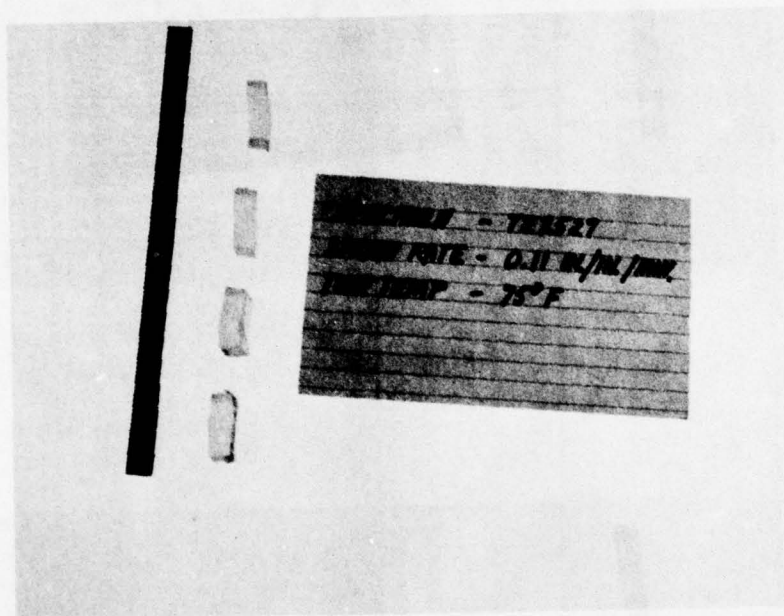


Figure J27.

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```
ex clst(stsstr) 'd1(ppg515a1) g(e77623.d0211.feg005) 1(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 ****
TEKSSC,CHG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
  SHEAR=1,COMP=2,SHORT TENSION=2
```

```
?
2
? ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
```

```
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
```

```
.01 1000
TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
1 PPG515-3            10328.      0.083
2 PPG515-4            11357.      0.079
3 PPG515-5            11457.      0.076
4 PPG515-6            11262.      0.074
5 PPG515-2            11438.      0.075
6 PPG515-1            11212.      0.076
```

```
MAX STRAIN ON CURVE 6 OF 6= 0.112
```

PC NO.	AVG		A		B		C	
	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.037	233525.	0.037	187561.	0.037	206230.	0.037	216318.
4	0.058	184299.	0.058	162407.	0.058	171298.	0.058	176103.
6	0.083	136178.	0.083	121968.	0.083	127739.	0.083	130858.
	STD DEV		AVG		A		B	
	MAX STRESS		= 232.108		11259.318		9573.759	
	STRAIN AT MAX STRESS		= 0.003		0.077		0.060	
	STRAIN AT 2ND PT ON BASE CURVE= 0.018							
	ELASTIC MODULUS AT 0.018		8831.		240337.		200665.	
	CHECK ON CALC-MEAN MODULUS ON TEST CURVES=		240291.		DELTA STRAIN= 0.0003			

Figure J28. Computer Run - PPG515.

```

ex clst(stsstr) 'd1(swu51501) l(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 *****
TEKSSC,CHG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
  SHEAR=1,COMP=2,SHORT TENSION=2
?
2
  ENTER NUMBER OF DATA FILES
?
1
  DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
  (1=YES,2=NO)
?
2
  Y-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
  TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
    1 SWV-515-1        11556.        0.064
    2 SWV-515-2        11937.        0.067
    3 SWV-515-3        12019.        0.066
    4 SWV-515-4        11907.        0.065
    5 SWV-515-5        11977.        0.074
  STRAIN AT FRACTURE POINT IS NOT NORMAL
  MAX STRAIN ON CURVE 5 OF 5= 0.115
    NOT NORMAL STRAIN SSTRESS DCRIT DCAC 13 1.000 0.0
      0.0584 11777. 0.3370 0.3390
      0.0596 11815. 0.3370 0.3509
    NOT NORMAL STRAIN SSTRESS DCRIT DCAC 14 1.000 0.0
      0.0596 11815. 0.3370 0.3509
      0.0611 11849. 0.3370 0.3600
      0.0626 11874. 0.3370 0.3571
      0.0640 11892. 0.3370 0.3771
      0.0656 11906. 0.3370 0.3924
      0.0671 11907. 0.3370 0.3976
      0.0686 11907. 0.3370 0.3811
    NOT NORMAL STRAIN SSTRESS DCRIT DCAC 15 1.000 0.0
      0.0686 11907. 0.3370 0.3811
      0.0695 11907. 0.3370 0.3766
      0.0705 11907. 0.3370 0.3719
      0.0714 11907. 0.3370 0.3675
      0.0723 11907. 0.3370 0.3637
      0.0732 11907. 0.3370 0.3612
      0.0741 11907. 0.3370 0.3602
  AVG      A      R      C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
    2 0.005 301234. 0.005 177675. 0.005 227903. 0.005 254061.
    4 0.014 300931. 0.014 218693. 0.014 252141. 0.014 270150.
    5 0.022 295140. 0.022 255803. 0.022 271796. 0.022 280409.
    8 0.031 279578. 0.031 258405. 0.031 267013. 0.031 271649.
  STD DEV      AVG      A      R      C
  MAX STRESS = 185.702 11868.149 10120.430 11115.074 11440.205
  STRAIN AT MAX STRESS = 0.004 0.067 0.044 0.053 0.059
  STRAIN AT 2ND PT ON BASE CURVE= 0.000
  STRAIN STD DEV      AVG      A      R      C
  ELASTIC MODULUS AT 0.000 21611. 300520. 159061. 215571. 247544.
  CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 302313. DELTA STRAIN= 0.0001

```

Figure J29. Computer Run - SWU515.

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ex clst(stsstr) 'd4(tex52704) g(e77623.d0244.feg020) 1(tekssc)
IKJ56706I ENDING QUOTE ASSUMED, 'd4(tex52704) g(e77623.d0244.feg020) 1(tekssc)
*** LOAD MODULE RELOCATION FACTOR = 0AF560 *****
TEKSSC,CHG 20,40-43-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=0,COMP=2,SHORT TENSION=2

?

?

2

ENTER NUMBER OF DATA FILES

?

4

DO YOU WANT TO DISCARD ANY TEST SPECIMENS,40 MAX
(1=YES,2=NO)

?

2

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

?

04 4000

TEST SPECIMENS-	MAX STRESS	STRAIN AT MAX STRESS
1 TEX527-4	44489.	0.064
2 TEX527-4	44357.	0.062
3 TEX527-3	44355.	0.059
4 TEX527-4	40900.	0.058
5 TEX527-5	40839.	0.062

MAX STRAIN ON CURVE 5 OF 5= 0.077

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	8 4.000 0.0
	0.0270	7876.	0.3370	0.3434	
	0.0278	8064.	0.3370	0.3496	
	0.0287	8250.	0.3370	0.3545	
	0.0295	8434.	0.3370	0.3566	

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	9 4.000 0.0
	0.0295	8434.	0.3370	0.3566	
	0.0304	8644.	0.3370	0.3553	
	0.0344	8790.	0.3370	0.3500	
	0.0324	8962.	0.3370	0.3399	

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.004	343465.	0.004	476440.	0.004	234830.	0.004	264838.
4	0.042	303056.	0.042	203850.	0.042	244482.	0.042	265903.
6	0.024	300336.	0.024	208544.	0.024	245864.	0.024	265959.
8	0.030	283993.	0.030	223489.	0.030	247909.	0.030	264222.

	STD DEV	AVG	A	B	C
MAX STRESS	= 296.474	44485.657	9448.490	40449.295	40532.404
STRAIN AT MAX STRESS	= 0.002	0.064	0.050	0.054	0.056
STRAIN AT 2ND PT ON BASE CURVE= 0.000					
	STRAIN	STD DEV	AVG	A	B
ELASTIC MODULUS AT 0.000	38289.	326690.	403225.	494075.	243003.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 326420. DELTA STRAIN= 0.0004					

Figure J30. Computer Run - TEX527.

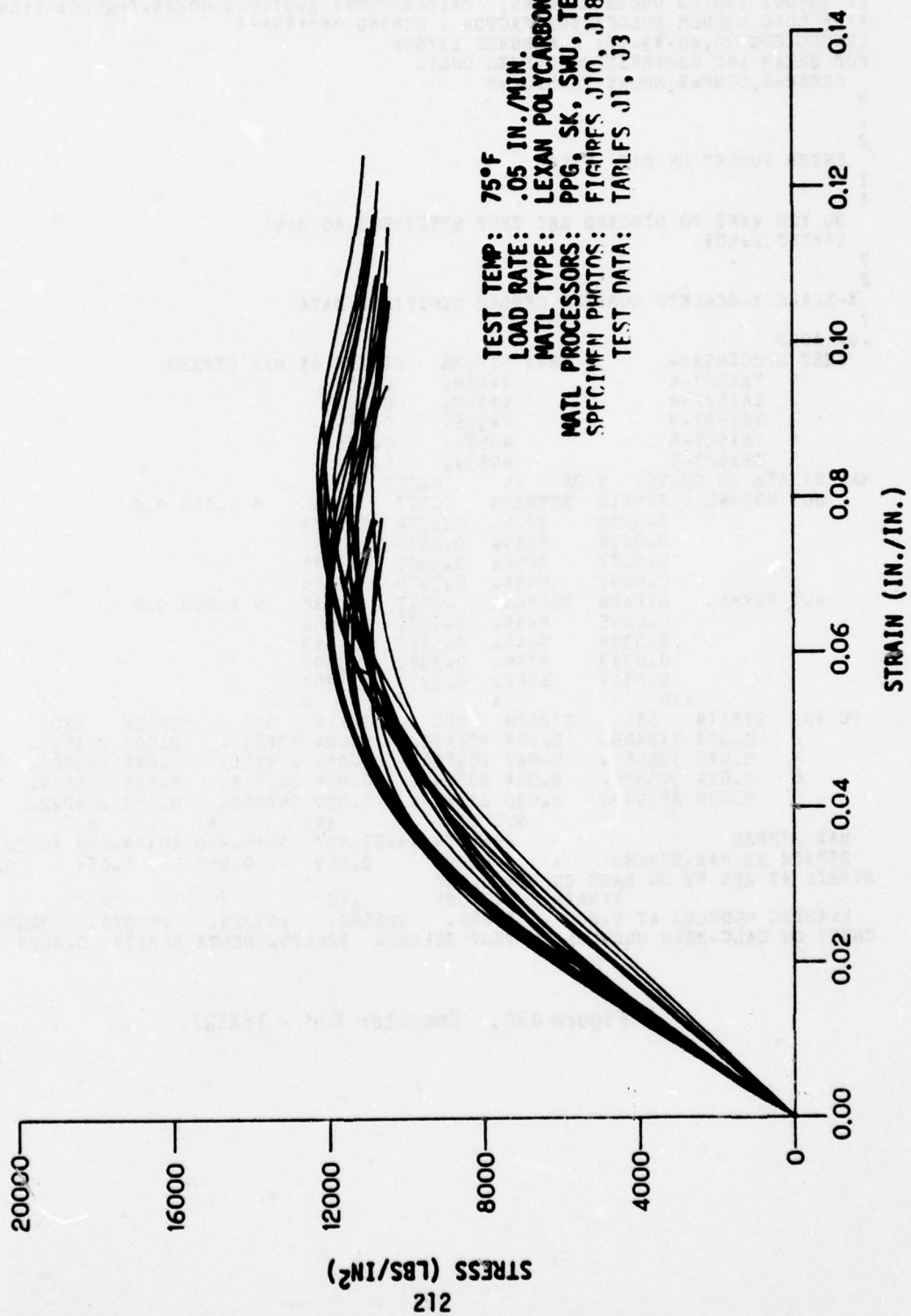


Figure J31. Compression Test Curves- Proposed Design Allowable.

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02 clat(altm) 'd1(ppg515a1) d2(ah51301) d3(au51501) d4(lex52701) g(e77623 d0811 feg037)'
IKJ567061 ENDING QUOTE ASSURED. 'd1(ppg515a1) d2(ah51301) d3(au51501) d4(lex52701) g(e77623 d0811 feg037)'
IKJ567121 INVALID KEYWORD. 0
IKJ56703A REENTER -

=====
TEXT:CHG 808. 8-18-78. J.F. BURKE M37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1.COMP=2.SHORT TENSION=3

?
8
ENTER NUMBER OF DATA FILES
?
4
DO YOU WANT TO DISCARD ANY TEST SPECIMENS.10 MAX
(1=YES.2=NO)
?
2
N-SCALE V-SCALE TO CORRECT GERBER DIGITISED DATA
.01 1000
TEST SPECIMENS-          MAX STRESS      STRAIN AT MAX STRESS
1 PPG515-3              10825.      0.053
2 PPG515-4              11387.      0.073
3 PPG515-5              11457.      0.070
4 PPG515-6              11865.      0.074
5 PPG515-8              11438.      0.075
6 PPG515-1              11812.      0.078
N-SCALE V-SCALE TO CORRECT GERBER DIGITISED DATA
.01 1000
7 SK513-1              11812.      0.090
8 SK513-2              10945.      0.063
9 SK513-3              10143.      0.061
10 SK513-4              10974.      0.050
11 SK513-5              10238.      0.053
N-SCALE V-SCALE TO CORRECT GERBER DIGITISED DATA
.01 1000
12 SUU-515-1           11508.      0.064
13 SUU-515-2           11937.      0.067
14 SUU-515-3           10918.      0.060
15 SUU-515-4           11907.      0.065
16 SUU-515-5           11977.      0.074
N-SCALE V-SCALE TO CORRECT GERBER DIGITISED DATA
.01 1000
17 TEX527-1            11489.      0.061
18 TEX527-2            11387.      0.063
19 TEX527-3            11385.      0.063
20 TEX527-4            10580.      0.058
21 TEX527-5            10839.      0.063
MAX STRAIN ON CURVE 10 OF 21-
NOT NORMAL STRAIN STRESS DCRIT DCAC 8 1.000 0.0
0.0008 8431. 0.1880 0.1912
0.0115 2231. 0.1880 0.2088
NOT NORMAL STRAIN STRESS DCRIT DCAC 4 1.000 0.0
0.0312 8553. 0.1880 0.1988
0.0255 8839. 0.1880 0.1957
0.0333 8668. 0.1880 0.1958
0.0353 9347. 0.1880 0.2111
0.0352 9417. 0.1880 0.1988
NOT NORMAL STRAIN STRESS DCRIT DCAC 5 1.000 0.0
0.0352 9347. 0.1880 0.2111
0.0352 9417. 0.1880 0.1988
0.0368 9578. 0.1880 0.2159
0.0389 9798. 0.1880 0.2183
0.0394 9981. 0.1880 0.2117
0.0409 10145. 0.1880 0.2005
NOT NORMAL STRAIN STRESS DCRIT DCAC 6 1.000 0.0
0.0469 10788. 0.1880 0.1829
0.0471 10882. 0.1880 0.1898

PC NO.  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC
0 0.017 875289. 0.017 162837. 0.017 205537. 0.017 235588.
4 0.038 848977. 0.038 176602. 0.038 206348. 0.038 222843.
8 0.050 811231. 0.050 174937. 0.050 188277. 0.050 198439.
8 0.064 178951. 0.064 187783. 0.064 186208. 0.064 178889.

MAX STRESS      STD DEV  AVG
STRAIN AT MAX STRESS      STD DEV  AVG
STRAIN AT END PT ON BASE CURVE- 0.001
ELASTIC MODULUS AT 0.001 46599 296788 149878 806594 239238
CHECK ON CALC-MEAN MODULUS ON TEST CURVES- 285583 DELTA -77.71N- 0.0003

```

Figure J32. Computer Run - Proposed Design Allowables.

TABLE J1. COMPRESSION TEST DATA

TEST NUMBER	TEST MEASUREMENT DATA					TEST CALCULATION DATA		
	TEST TEMP (°F)	LOAD RATE (IN/MIN)	GAGE LENGTH (IN)	GAGE AREA (IN ²)	MAXIMUM LOAD (LBS)	STRAIN RATE (IN/IN/MIN)	MAX. STRESS (LBS/IN ²)	STRAIN @ MAX. STRESS (IN/IN)
PPG515/26-1	75	.050	.6411	.0909	1044	.077	11485	.0730
PPG515/26-2	75	.050	.6470	.0905	1004	.077	11094	.0660
PPG515/26-3	75	.050	.6448	.0911	1048	.077	11508	.0730
SK511-1	78	.050	1.773	.3800	4940	.029	12731	.0720
SK511-2	78	.050	1.742	.4331	5000	.029	11545	.0700
SK511-3	78	.050	1.737	.4336	5030	.029	11600	.0702
SK511-4	78	.050	1.739	.4352	5000	.029	11489	.0700
SK511-5	78	.050	1.716	.4334	5020	.029	11583	.0690
SK513-1	78	.050	.5255	.0755	894	.096	11841	.0800
SK513-2	78	.050	.5216	.0735	900	.096	12245	.0830
SK513-3	78	.050	.5210	.0726	880	.096	12121	.0810
SK513-4	78	.050	.5215	.0738	890	.096	12060	.0900
SK513-5	78	.050	.5229	.0728	890	.096	12225	.0830
SK545 /107	78	.050	1.7330	.4325	5320	.029	12301	.0680
-2	78	.050	1.7330	.4284	5210	.029	12162	.0660
-3	78	.050	1.7360	.4311	5220	.029	12109	.0670
-4	78	.050	1.7330	.4374	5310	.029	12140	.0670
-5	78	.050	1.7340	.4325	5250	.029	12139	.0660
-6	78	.050	1.7370	.4292	5220	.029	12162	.0680

TABLE J2. COMPRESSION TEST DATA

TEST NUMBER	TEST MEASUREMENT DATA					TEST CALCULATION DATA		
	TEST TEMP (°F)	LOAD RATE (IN/MIN)	GAGE LENGTH (in)	GAGE AREA (IN ²)	MAXIMUM LOAD (LBS)	STRAIN RATE (IN/IN/MIN)	MAX. STRESS (LBS/IN ²)	STRAIN @ MAX. STRESS (IN/IN)
SMUS45 /108 -1	78	.050	1.734	.4418	5370	.029	12155	.0690
	78	.050	1.732	.4452	5370	.029	12062	.0660
	78	.050	1.733	.4429	5350	.029	12079	.0670
	78	.050	1.734	.4441	5410	.029	12182	.0670
	78	.050	1.735	.4437	5380	.029	12125	.0690
	78	.050	1.733	.4445	5360	.029	12058	.0640
SMUS47 /107 -1	78	.050	.5270	.0724	936	.100	12928	.0640
	78	.050	.5268	.0718	926	.100	12897	.0590
	78	.050	.5270	.0712	916	.100	12865	.0580
	78	.050	.5261	.0723	932	.100	12891	.0590
	78	.050	.5269	.0721	928	.100	12871	.0590
	78	.050	.5255	.0724	932	.100	12873	.0560
SMUS47 /108 -1	75	.050	.5030	.0847	1004	.096	11854	.0610
	75	.050	.4996	.0847	1000	.096	11806	.0620
	75	.050	.5037	.0848	1008	.096	11887	.0620
	75	.050	.5025	.0850	1012	.096	11906	.0620
	75	.050	.5032	.0851	1006	.096	11821	.0620
	75	.050	.5050	.0847	1012	.096	11948	.0620
	75	.050	.5030	.0851	1016	.096	11939	.0640
PPG515-1	75	.050	.4970	.0913	1044	.100	11435	.0830
	75	.050	.4970	.0898	1042	.100	11604	.0790
	75	.050	.4966	.0915	1020	.100	11148	.0760
	75	.050	.4972	.0911	1030	.100	11306	.0740
	75	.050	.5025	.0888	1042	.100	11734	.0750
	75	.050	.5039	.0902	1048	.100	11619	.0760

TABLE J3. COMPRESSION TEST DATA

TEST NUMBER	TEST MEASUREMENT DATA					TEST CALCULATION DATA		
	TEST TEMP (°F)	LOAD RATE (IN/MIN)	GAGE LENGTH (IN)	GAGE AREA (IN ²)	MAXIMUM LOAD (LBS)	STRAIN RATE (IN/IN/MIN)	MAX. STRESS (LBS/IN ²)	STRAIN @ MAX. STRESS (IN/IN)
SWU515-1	78	.050	.6549	.0950	1122	.077	11811	.0640
SWU515-2	78	.050	.6540	.0943	1152	.077	12216	.0670
SWU515-3	78	.050	.6522	.0934	1140	.077	12206	.0660
SWU515-4	78	.050	.6490	.0936	1140	.077	12179	.0650
SWU515-5	78	.050	.6528	.0937	1144	.077	12209	.0740
TEX527-1	75	.050	.8668	.1315	1544	.057	11741	.0610
TEX527-2	75	.050	.8660	.1326	1540	.057	11614	.0620
TEX527-3	75	.050	.8709	.1314	1516	.057	11537	.0590
TEX527-4	75	.050	.8729	.1330	1484	.057	11158	.0580
TEX527-5	75	.050	.8731	.1309	1450	.057	11077	.0620

The following test data are presented for use in conjunction with
 material's property data presented in the following tables of Section VII
 (Part I).

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APPENDIX K

LOW STRAIN RATE SHEAR TEST DATA

(SECTION VII, PART 1)

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The following test data are presented for use in conjunction with materials property data presented in the following tables of Section VII (Part 1).

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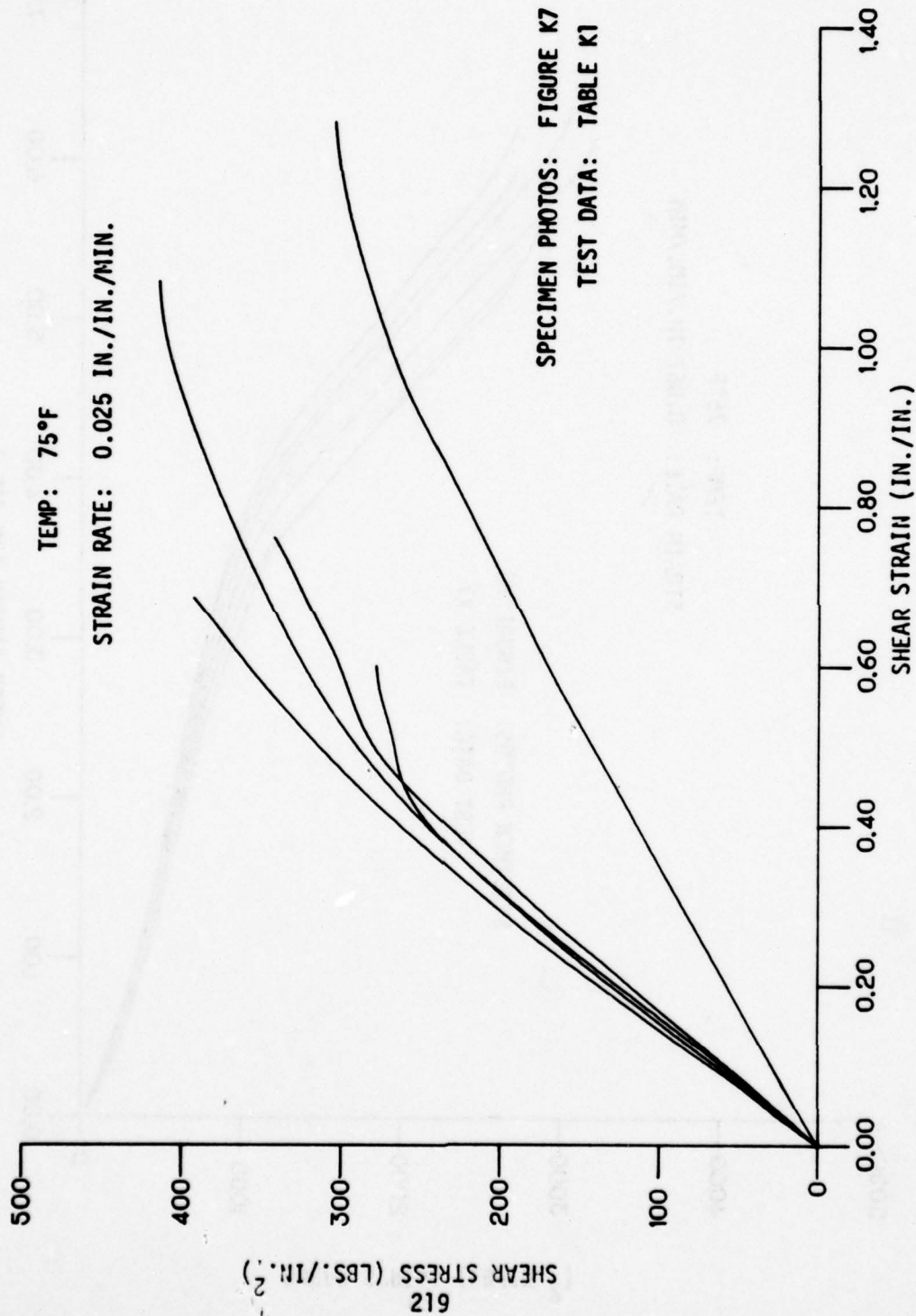


Figure K1. Shear Test Curves (PPG529 - 0.06 PPG 112 Interlayer)

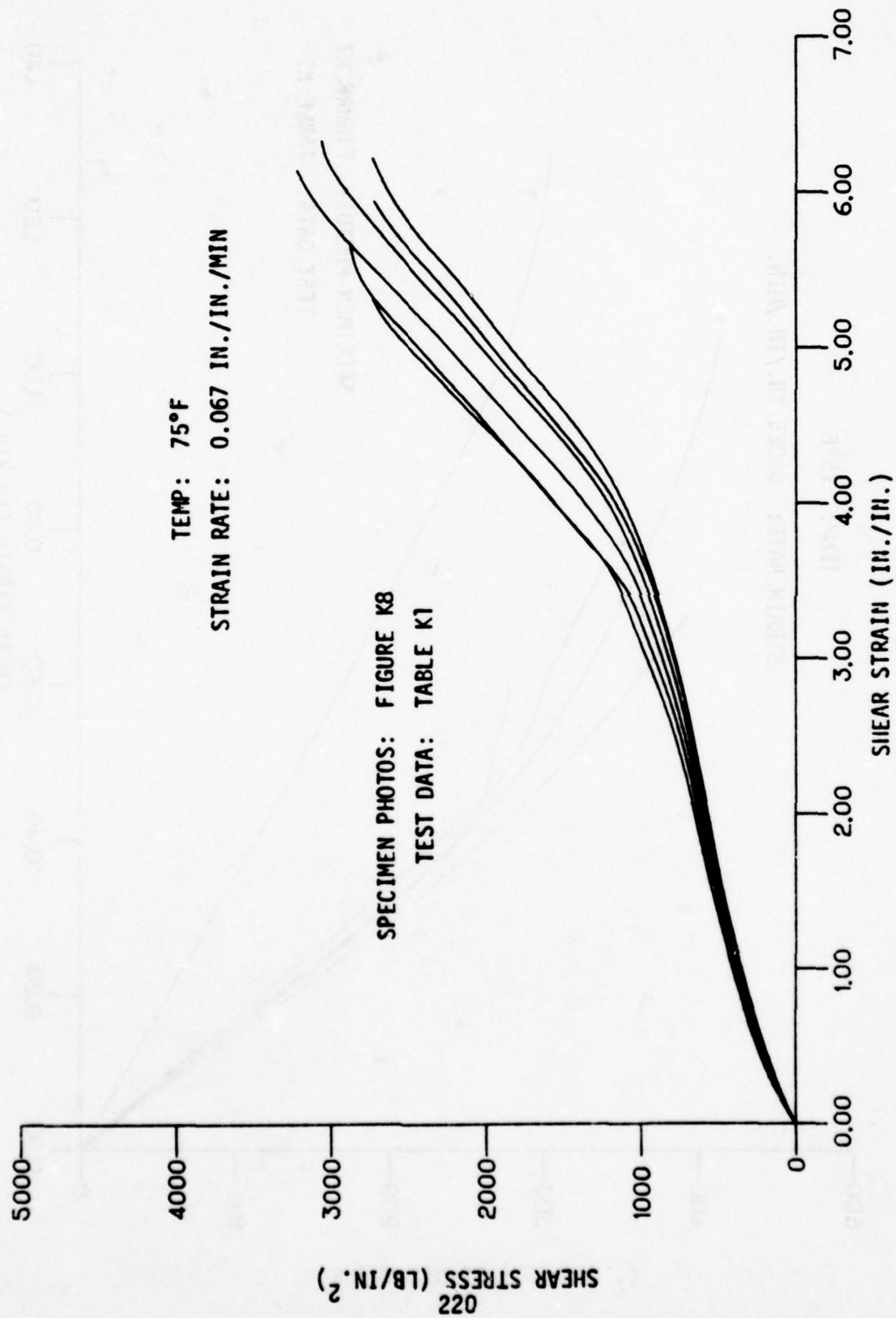


Figure K2. Shear Test Curves (PPG531 - 0.12 PPG112 Interlayer).

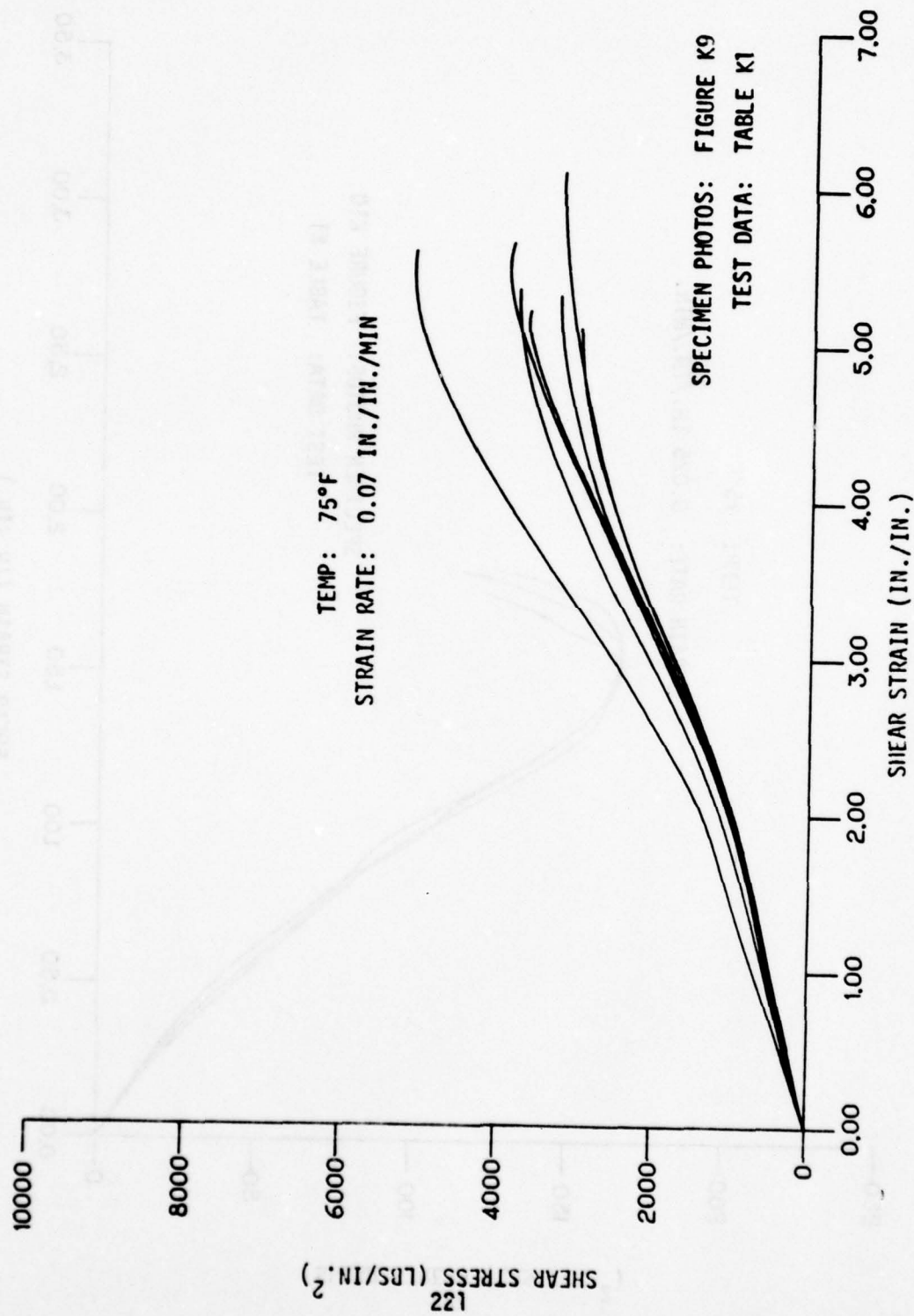


Figure K3. Shear Test Curves (PPG533 - 0.12 PPG112 Interlayer).

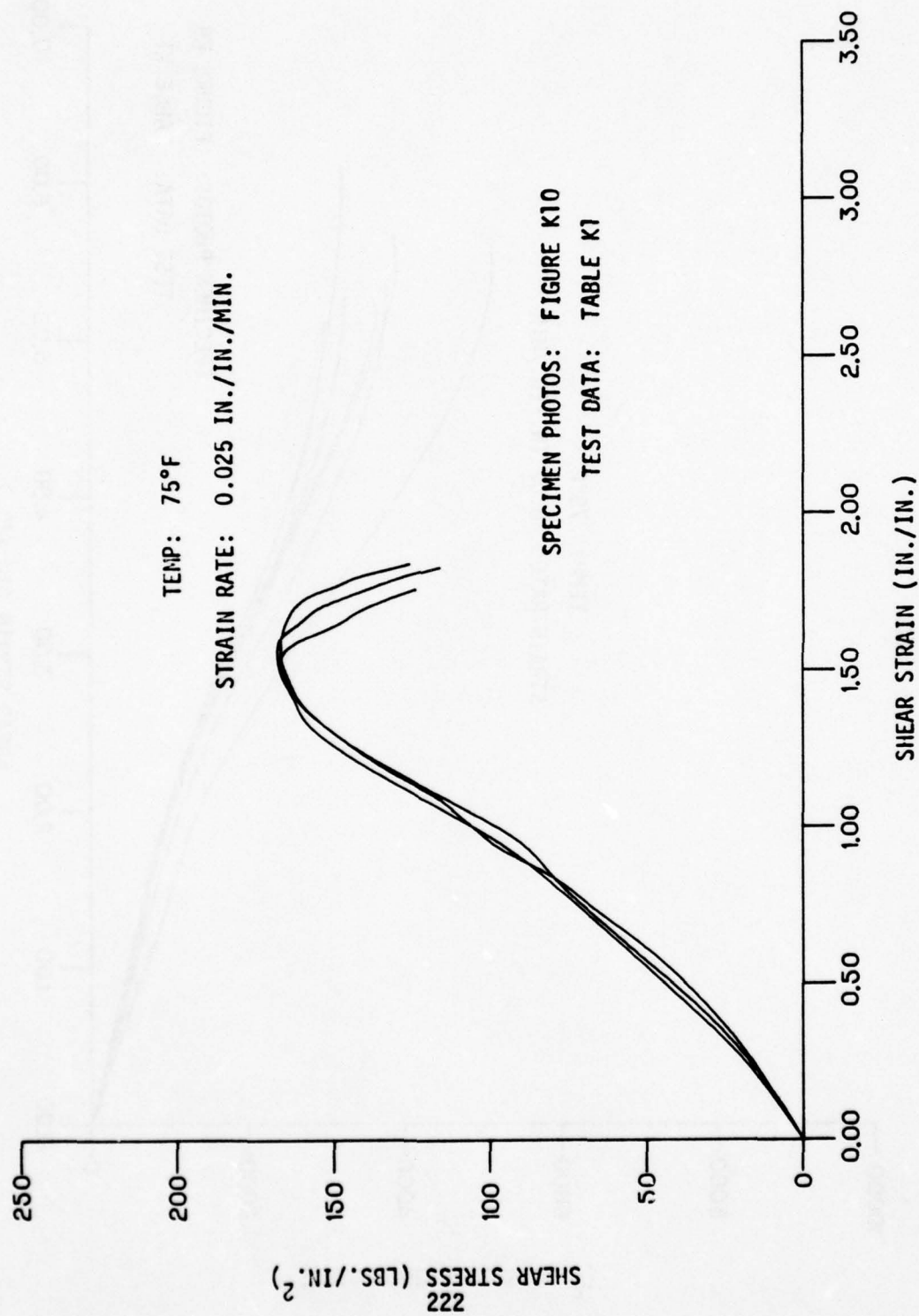


Figure K4. Shear Test Curves (SK531 - 0.12 S100 Interlayer)

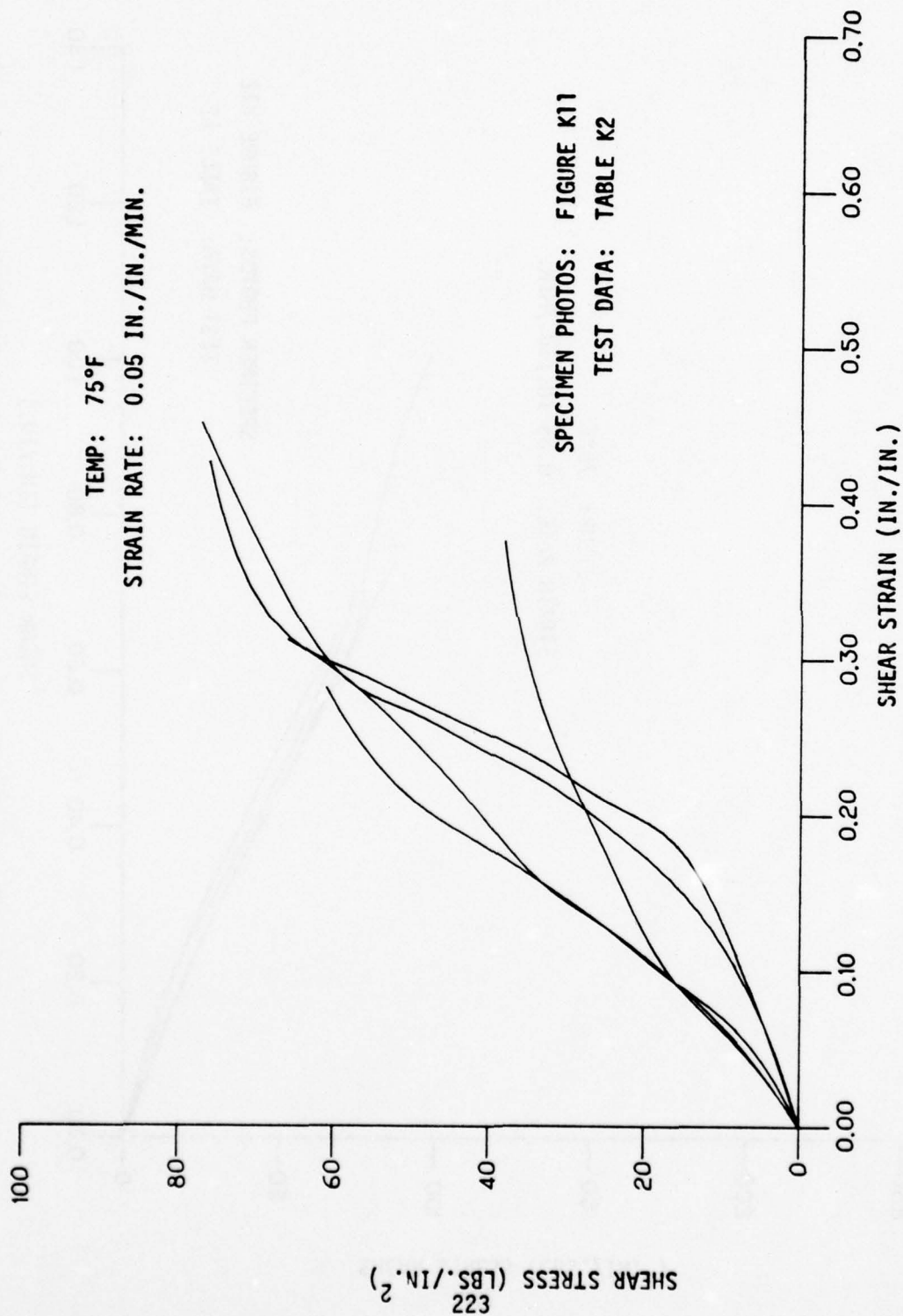


Figure K5. Shear Test Curves (SWU533 (108) -0.12 SS5272Y(HT) Interlayer).

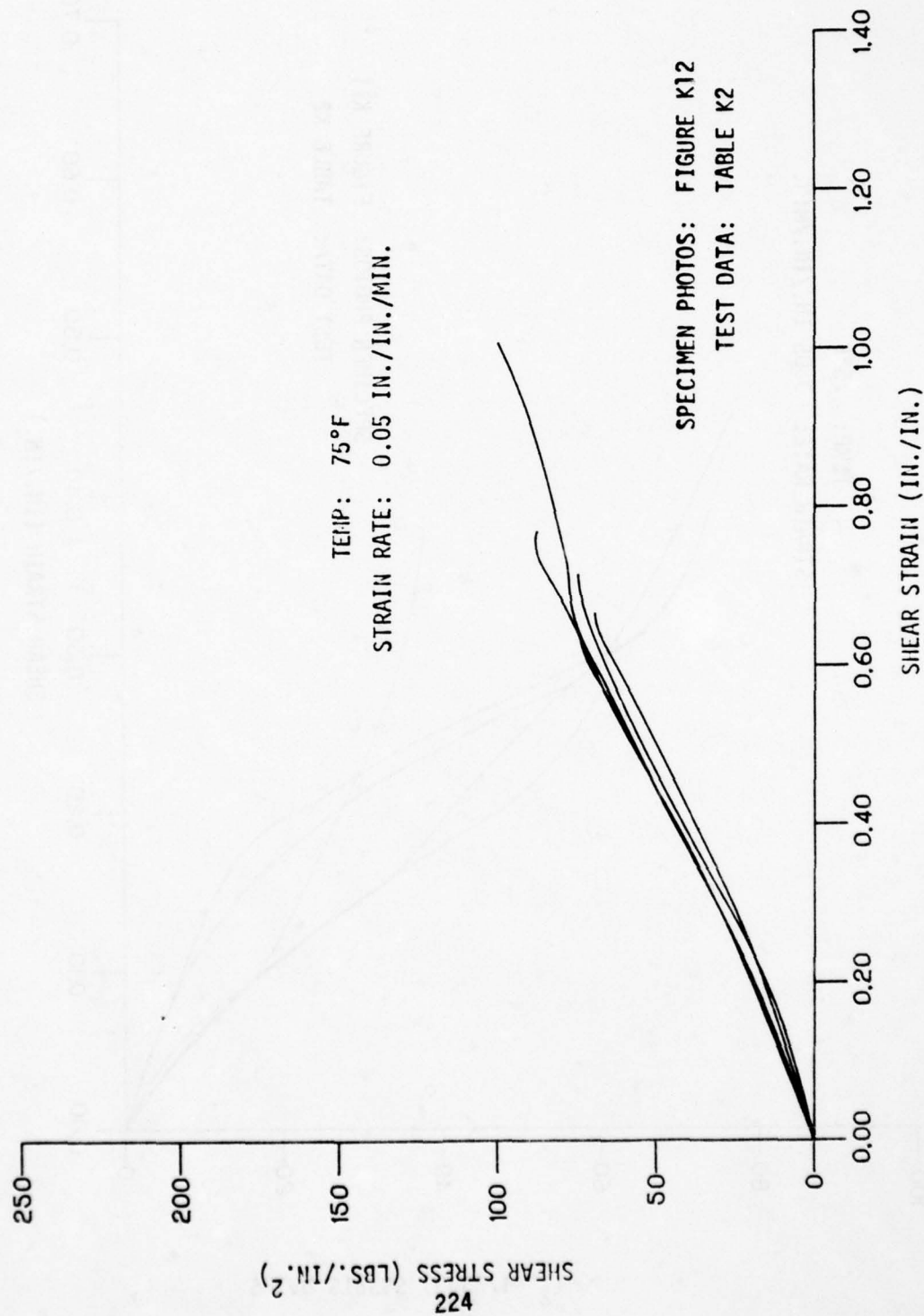


Figure K6. Shear Test Curves (SWU533/107 - 0.12 SS5272Y(HT) Interlayer).

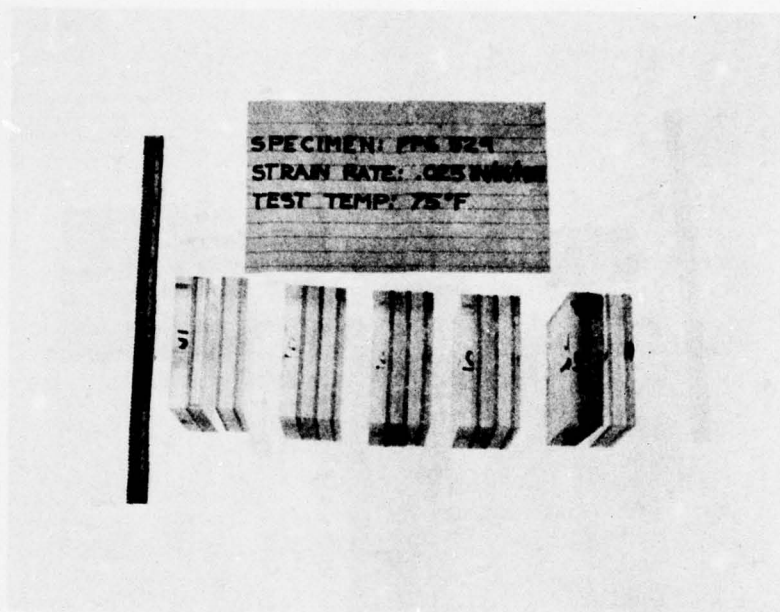


Figure K7.

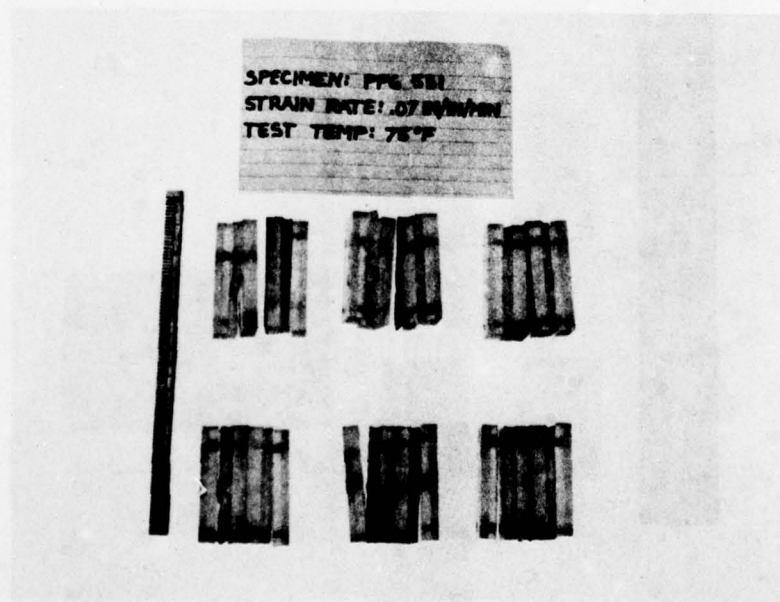


Figure K8.

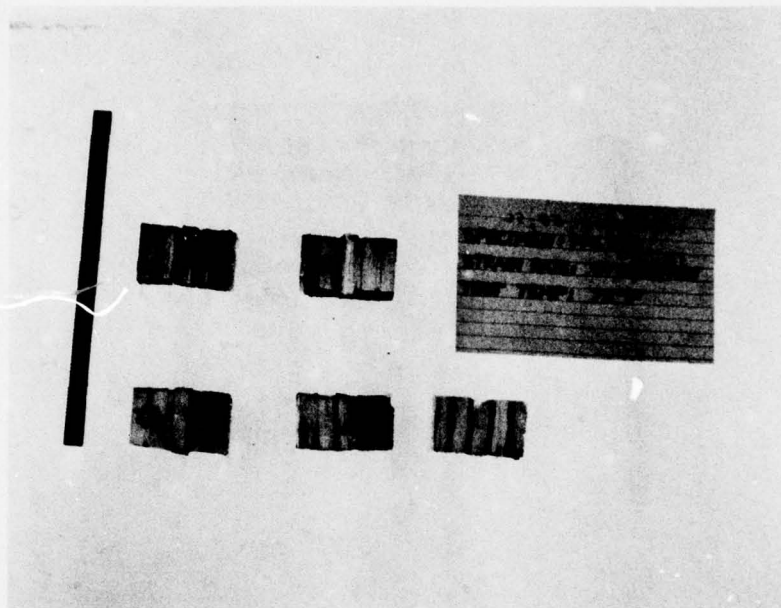


Figure K9.

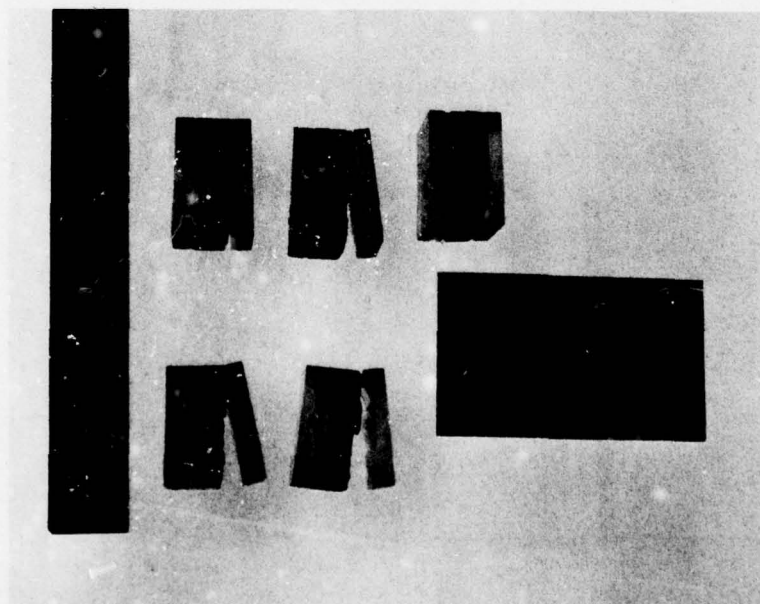


Figure K10.
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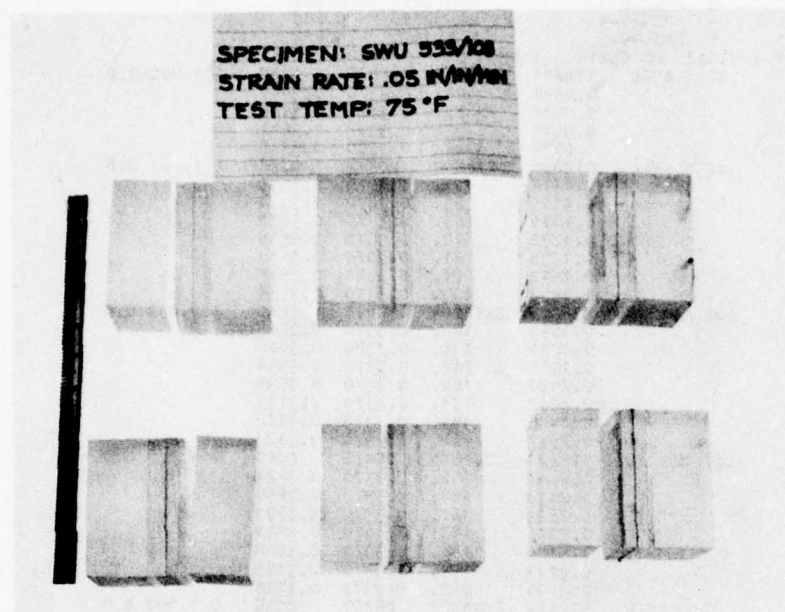


Figure K11.

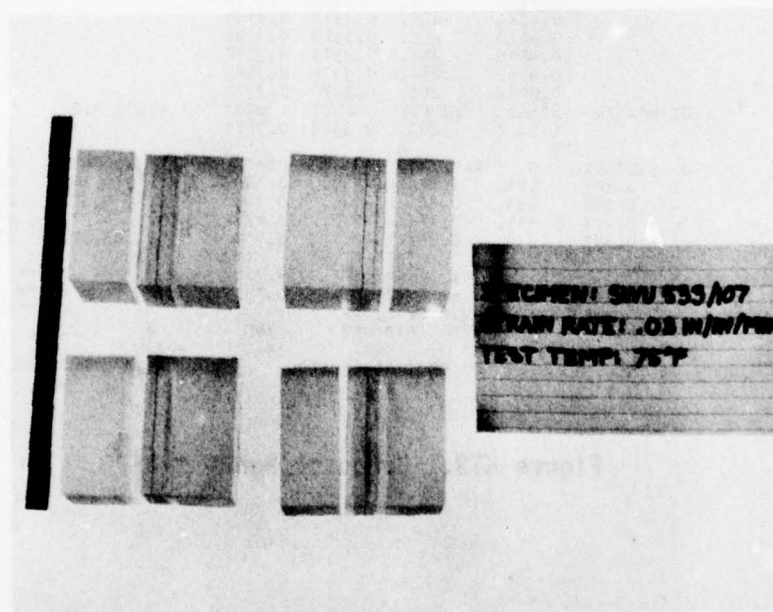


Figure K12.
227

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TEST SPECIMENS-	MAX STRESS	STRAIN AT MAX STRESS	
1 PPG529-1	304.	1.200	PPG52901
2 PPG529-2	414.	1.000	
3 PPG529-3	341.	0.760	
4 PPG529-4	272.	0.600	
5 PPG529-5	392.	0.624	

MAX STRAIN ON CURVE	1 OF 5	5	1.200			
NOT NORMAL	STRAIN	STRESS	DCRIT	DCAC	1	1.000 0.0
	0.0346	22.	0.3370	0.3459		
	0.0514	29.	0.3370	0.3534		
	0.0643	37.	0.3370	0.3542		
	0.0772	44.	0.3370	0.3515		
NOT NORMAL	STRAIN	STRESS	DCRIT	DCAC	2	1.000 0.0
	0.0772	44.	0.3370	0.3515		
	0.0925	53.	0.3370	0.3531		
	0.1079	63.	0.3370	0.3532		
	0.1222	72.	0.3370	0.3515		
	0.1366	81.	0.3370	0.3521		
	0.1540	91.	0.3370	0.3547		
	0.1593	100.	0.3370	0.3562		
NOT NORMAL	STRAIN	STRESS	DCRIT	DCAC	3	1.000 0.0
	0.1693	100.	0.3370	0.3568		
	0.1826	109.	0.3370	0.3570		
	0.1975	117.	0.3370	0.3554		
	0.2120	120.	0.3370	0.3534		
	0.2262	134.	0.3370	0.3535		
	0.2405	143.	0.3370	0.3570		
	0.2547	152.	0.3370	0.3523		
NOT NORMAL	STRAIN	STRESS	DCRIT	DCAC	4	1.000 0.0
	0.2547	152.	0.3370	0.3523		
	0.2690	160.	0.3370	0.3567		
	0.2833	169.	0.3370	0.3591		
	0.2976	177.	0.3370	0.3701		
	0.3120	185.	0.3370	0.3704		
	0.3263	193.	0.3370	0.3708		
	0.3406	200.	0.3370	0.3719		
NOT NORMAL	STRAIN	STRESS	DCRIT	DCAC	5	1.000 0.0
	0.3406	200.	0.3370	0.3719		
	0.3551	203.	0.3370	0.3742		
	0.3695	216.	0.3370	0.3774		
	0.3839	224.	0.3370	0.3810		
	0.3983	232.	0.3370	0.3862		
	0.4128	240.	0.3370	0.3917		
	0.4272	246.	0.3370	0.3978		
NOT NORMAL	STRAIN	STRESS	DCRIT	DCAC	6	1.000 0.0
	0.4272	246.	0.3370	0.3978		
	0.4403	255.	0.3370	0.4040		
	0.4544	261.	0.3370	0.4103		
	0.4680	262.	0.3370	0.3929		
	0.4816	263.	0.3370	0.3735		
	0.4952	264.	0.3370	0.3543		
	0.5087	265.	0.3370	0.3370		
NOT NORMAL	STRAIN	STRESS	DCRIT	DCAC	7	1.000 0.0
	0.5087	260.	0.3370	0.3370		

PC NO.	RADIANS	G	RADIANS	G	RADIANS	G	RADIANS	G
2	0.168	574.	0.165	-360.	0.158	20.	0.169	224.
4	0.328	551.	0.320	-245.	0.329	30.	0.320	232.
6	0.471	555.	0.471	-270.	0.471	64.	0.471	246.
8	0.597	510.	0.597	-217.	0.597	70.	0.597	272.

MAX STRESS	STD DEV	AVG			
57.218	328.334	0.0	2.528	58.170	
0.285	0.881	0.0	0.777	0.242	

STRAIN AT 2ND PT ON EACH CURVE	STRAIN	STD DEV	AVG	A	B	C
0.077	164.	594.	-0.10.	-0.	0.015	

CHIEF OF CALC-MEAN MODULUS ON TEST CURVES= 576. DELTA STRAIN= 0.0015

Figure K13. Computer Run - PPG529.

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ux clst(stsssc) 'd1(ppj53102) j(e77623.d0211.fej023) l(tekssc)
**** LOAD MODULE REDUCTION FACTOR = JAF560 *****
FEAS3C,ENG 23,10-11-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=2
?
1
2 ENTER NUMBER OF DATA FILES
?
1
2 DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
  (1=YES,2=NO)
?
2
3 X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 1000
  TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
  1 PPG531-2            3052.      6.325
  2 PPG531-3            3213.      6.134
  3 PPG531-4            2723.      5.307
  4 PPG531-5            2715.      5.937
  5 PPG531-6            2864.      5.646
  6 PPG531-7            2726.      6.212
MAX STRAIN #0.1 CURVE 1 OF 6= 6.325
  AVG
PC NO.  RADIANS  G  RADIANS  G  #RADIANS  G  RADIANS  G
  2  0.382  507.  0.382  273.  0.382  368.  0.382  420.
  4  0.669  484.  0.669  319.  0.669  336.  0.669  422.
  6  0.876  493.  0.876  361.  0.876  415.  0.876  444.
  8  1.013  516.  1.013  381.  1.013  436.  1.013  466.
      STD DEV      AVG
MAX STRESS      = 207.920  2799.880  525.490  1192.592  1811.591
STRAIN AT MAX STRESS = 0.336  5.927  3.421  4.766  5.195
STRAIN AT 2.0 PT ON BASE CURVE= 0.201
      STRAIN  STD DEV      AVG      A      B      C
SHEAR MODULUS AT J.201  43.  497.  292.  375.  420.
CHECK OF CALC-MEAN MODULUS ON TEST CURVES= 496. DELTA STRAIN= 0.0031

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Figure K14. Computer Run - PPG531.

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X-SCALE Y-SCALE TO CORRECT GREYER DIGITIZED DATA

1 1000

TEST SPECIMENT-	MAX STRESS	STRAIN AT MAX STRESS
1 PPG533-3C	2986.	5.106
2 PPG533-5B	3784.	5.303
3 PPG533-5C	3227.	5.963
4 PPG533-5D	5133.	5.464
5 PPG533-4B	3257.	5.265
6 PPG533-4C	3661.	5.130
7 PPG533-4D	3916.	5.477

MAX STRAIN ON CURVE 3 OF 7= 6.103

NOT NORMAL	STRAIN	STRESS	DCRIT	DCAC	3 1.000 0.0
	1.3230	679.	0.3000	0.3063	
	1.4302	715.	0.3000	0.3165	
	1.4506	753.	0.3000	0.3241	
NOT NORMAL	STRAIN	STRESS	DCRIT	DCAC	4 1.000 0.0
	1.4508	753.	0.3000	0.3241	
	1.5760	794.	0.3000	0.3292	
	1.6604	836.	0.3000	0.3316	
	1.7441	883.	0.3000	0.3326	
	1.8269	930.	0.3000	0.3325	
	1.9089	960.	0.3000	0.3317	
	1.9900	1032.	0.3000	0.3306	
NOT NORMAL	STRAIN	STRESS	DCRIT	DCAC	5 1.000 0.0
	1.9900	1032.	0.3000	0.3306	
	2.0776	1091.	0.3000	0.3301	
	2.1642	1154.	0.3000	0.3294	
	2.2497	1218.	0.3000	0.3286	
	2.3341	1285.	0.3000	0.3272	
	2.4176	1354.	0.3000	0.3251	
	2.5002	1425.	0.3000	0.3220	
NOT NORMAL	STRAIN	STRESS	DCRIT	DCAC	6 1.000 0.0
	2.5002	1425.	0.3000	0.3220	
	2.5836	1500.	0.3000	0.3180	
	2.6665	1575.	0.3000	0.3137	
	2.7485	1652.	0.3000	0.3096	
	2.8294	1729.	0.3000	0.3067	
	2.9106	1806.	0.3000	0.3049	
	2.9909	1882.	0.3000	0.3049	
NOT NORMAL	STRAIN	STRESS	DCRIT	DCAC	7 1.000 0.0
	2.9909	1882.	0.3000	0.3049	
	3.0746	1962.	0.3000	0.3089	
	3.1582	2041.	0.3000	0.3101	
	3.2419	2120.	0.3000	0.3137	
	3.3261	2199.	0.3000	0.3169	
	3.4110	2279.	0.3000	0.3190	
	3.4970	2359.	0.3000	0.3197	
NOT NORMAL	STRAIN	STRESS	DCRIT	DCAC	8 1.000 0.0
	3.4970	2359.	0.3000	0.3197	
	3.5779	2435.	0.3000	0.3187	
	3.6600	2513.	0.3000	0.3162	
	3.7434	2592.	0.3000	0.3121	
	3.8282	2672.	0.3000	0.3064	

PC NO.	RADIANS	G	RADIANS	G	RADIANS	G	RADIANS	G
2	0.767	669.	0.767	234.	0.767	419.	0.767	520.
4	1.105	972.	1.105	375.	1.105	617.	1.105	749.
6	1.248	1560.	1.248	507.	1.248	935.	1.248	1167.
8	1.326	2210.	1.326	541.	1.326	1219.	1.326	1567.

STD DEV AVG
MAX STRESS = 711.698 3694.239 732.049 1732.000 2416.738
STRAIN AT MAX STRESS = 0.291 5.390 3.702 4.506 4.666
STRAIN AT 2ND PT ON BASE CURVE= 0.504
STRAIN STD DEV AVG
SHEAR MODULUS AT 0.504 99. 677. 257. 428. 520.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 677. DELTA STRAIN= 0.0079

Figure K15. Computer Run - PPG533.

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1  clst(stmtrr,'d:\ek5\101' ptc77023.d5211.f00016)'
2  **** LOAD MODULE SUBROUTINE LACOMP = DAFS/C *****
3  IFNOST.CMG 23,15-16-77; JLF.CURVES X47544
4  FOR STRAIN AND COMPRESSION CURVES ONLY.
5  CMPL=1,COMP=2,CURVE TENSION=2
6
7
8  ENTER NUMBER OF DATA FILES
9
10
11 DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 16 MAY
12 (1=YES,2=NO)
13
14
15 INPUT NUMBER TO BE DISCARDED & POSITION NUMBERS ONE AT A TIME
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Figure K16. Computer Run - SK531.

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```

ex clsc(stsstr) 'd1(swu53307) g(e77623.d0211.feg015) i(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 ****
TEKSSC,CLG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=2
2
1
1 ENTER NUMBER OF DATA FILES
2
1
1 DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
2
1
1 INPUT NUMBER TO BE DISCARDED- & POSITION NUMBERS ONE AT A TIME
2
1
2
1
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
2
.1 10
TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
2  SWU533-108-8      66.      0.312
3  SWU533-108-9      61.      0.281
4  SWU533-108-1      38.      0.376
5  SWU533-108-1      77.      0.451
6  SWU533-10 -1      76.      0.425
MAX STRAIN ON CURVE 4 OF 5= 0.451
NOT NORMAL STRAIN SSTRESS DCRIT DCAC 1 1.000 0.0
0.0885 15. 0.3370 0.3535
NOT NORMAL STRAIN SSTRESS DCRIT DCAC 7 1.000 0.0
0.2867 55. 0.3370 0.3647
NOT NORMAL STRAIN SSTRESS DCRIT DCAC 8 1.000 0.0
0.2867 55. 0.3370 0.3647
0.2940 59. 0.3370 0.4291
0.3027 61. 0.3370 0.4423
0.3126 61. 0.3370 0.3853
0.3234 61. 0.3370 0.3596
0.3348 61. 0.3370 0.3379
AVG A B C
PC NO. RADIANS G RADIANS G RADIANS G RADIANS G
2 0.157 153. 0.157 -197. 0.157 -55. 0.157 22.
4 0.219 174. 0.219 -99. 0.219 12. 0.219 72.
6 0.260 187. 0.260 -30. 0.260 58. 0.260 105.
8 0.334 181. 0.334 -50. 0.334 44. 0.334 94.
STD DEV AVG A B C
MAX STRESS = 15.823 61.376 0.0 0.0 13.457
STRAIN AT MAX STRESS = 0.072 0.369 0.0 0.0 0.214
STRAIN AT 2ND PT ON BASE CURVE= 0.103
STRAIN STD DEV AVG A B C
SHEAR MODULUS AT 0.103 76. 157. -140. -18. 40.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 166. DELTA STRAIN= 0.0010

```

Figure K17. Computer Run - SWU533/108.

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0X DISC(STRESS) 1(1(0.753307) 2(0.7762) 3(0.211) 4(0.00) 1(0.0000)
**** LOAD MODULE RELOCATION FACTOR = 0.0000 *****
INSTRUMENT 20,10-15-77; J.E. LUPES X37524
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHEAR TENSION=2
?
1
2 ENTER NUMBER OF DATA FILES
?
4
2 DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
  (1=YES, 2=NO)
?
2
1 X-SCALE Y-SCALE TO CORRECT GIBBER DIGITIZED DATA
?
1 100
  TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
    1 SWU533/17-7      90.      1.007
    2 SWU533/17-8      88.      0.757
    3 SWU533/17-9      74.      0.745
    4 SWU533/17-10     74.      0.640
    5 SWU533/17-11     60.      0.666
  MAX STRAIN ON CURVE 1 OF 5 = 1.007
  NOT NORMAL STRAIN SSTRESS DEBIT DCAC 2 1.000 0.0
    0.2406 25. 0.3370 0.3421
    0.2723 27. 0.3370 0.3501
    0.2946 30. 0.3370 0.3543
  AVG A B C
  PC NO. RADIAN G RADIAN G RADIAN G RADIAN G
    2 0.307 103. 0.307 57. 0.307 76. 0.307 96.
    4 0.520 125. 0.520 87. 0.520 102. 0.520 110.
    6 0.508 125. 0.508 88. 0.508 103. 0.508 111.
    8 0.641 120. 0.641 59. 0.641 88. 0.641 97.
  STD DEV AVG A B C
  MAX STRESS = 12.503 77.000 4.107 16.533 41.315
  STRAIN AT MAX STRESS = 0.147 0.757 0.170 0.257 0.442
  STRAIN AT 2ND PT ON BASE CURVE = 0.170
  STRAIN STD DEV AVG A B C
  SHEAR MODULUS AT 0.170 105. 78. 84. 95.
  CHECK ON CALC-GRAN MODULUS ON TEST CURVES= 105. DELTA STRAIN= 0.0023

```

Figure K18. Computer Run - SWU533/107.

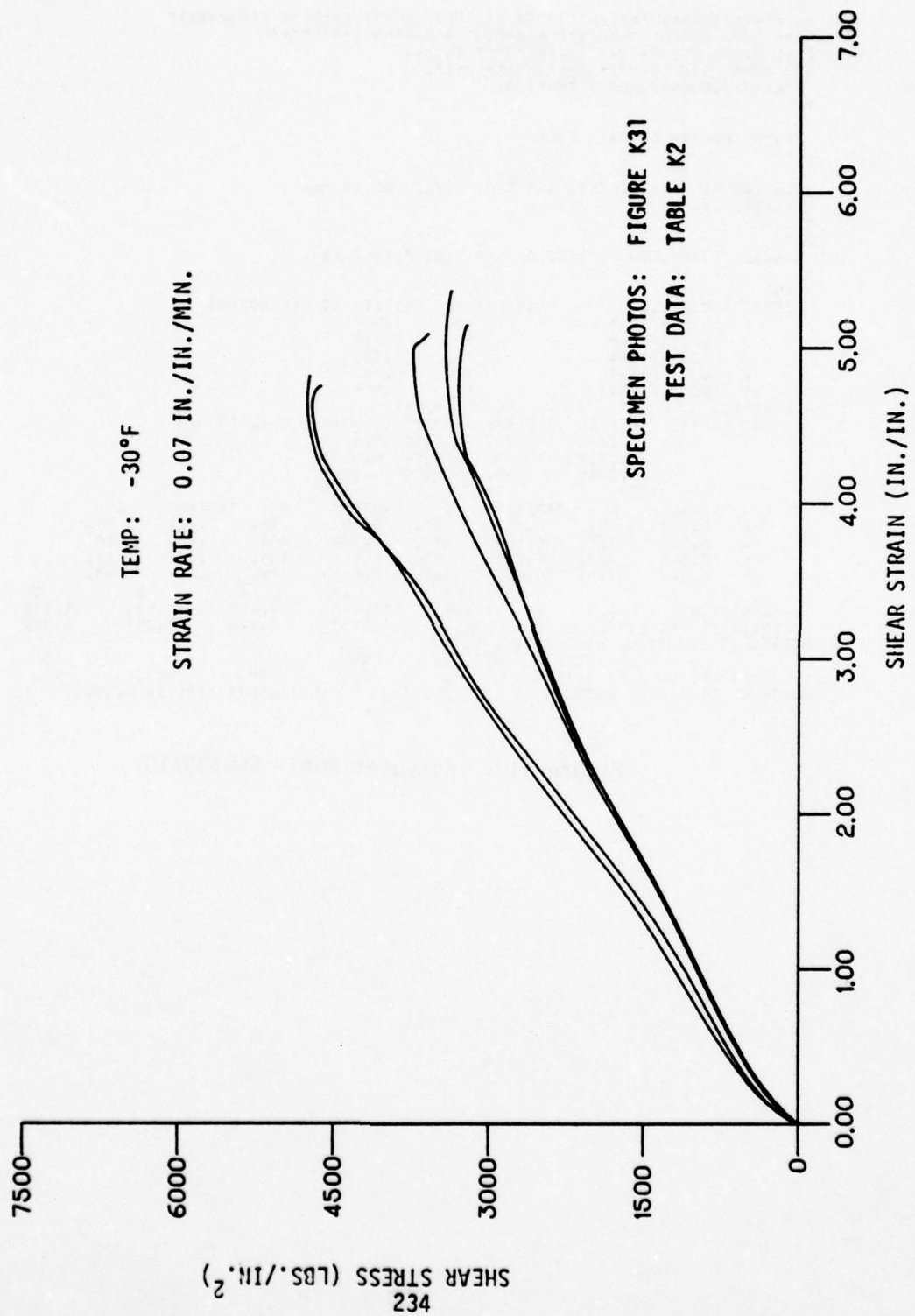


Figure K19 Shear Test Curves (PPG531 - 0.12 PPG112 Interlayer)

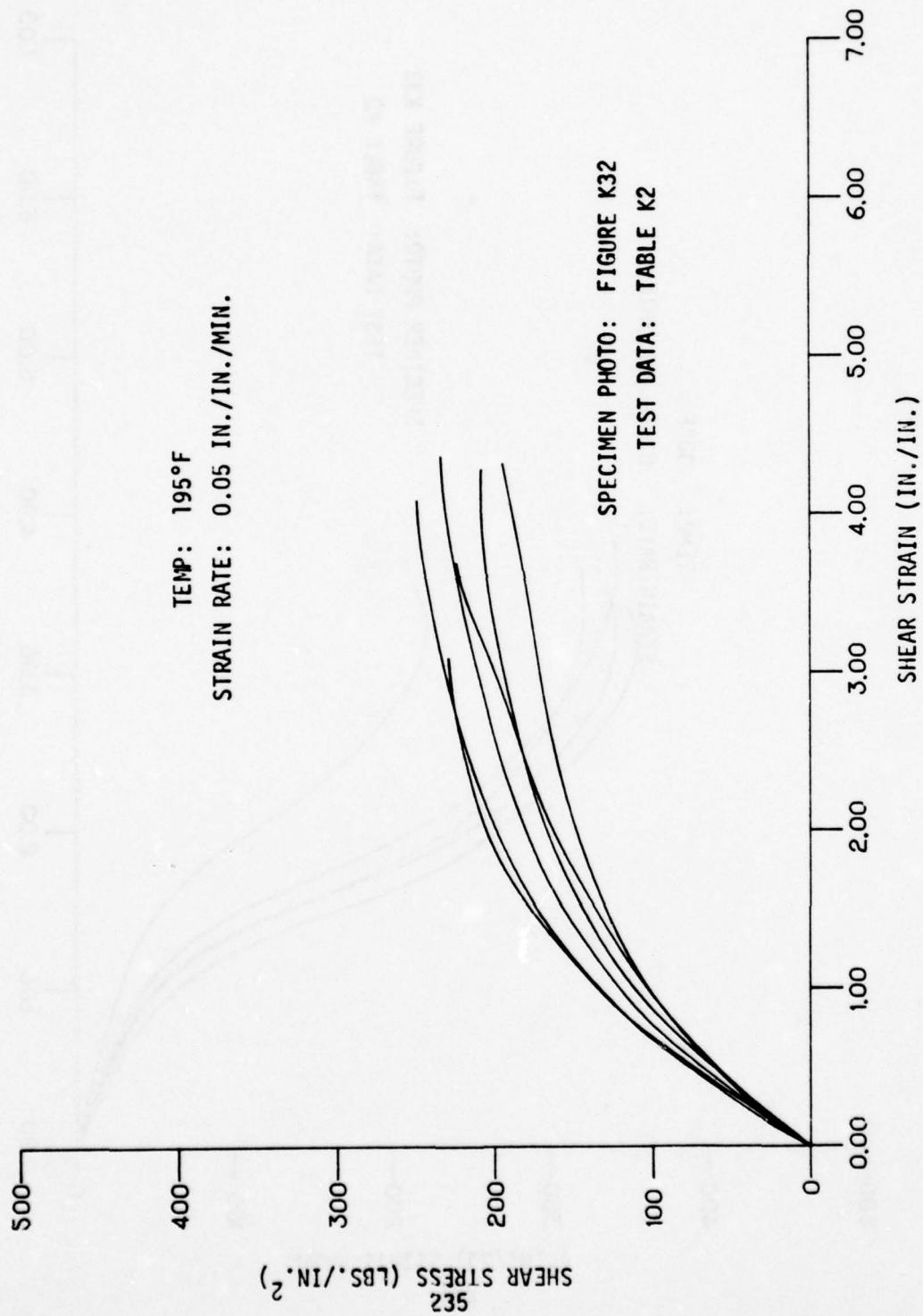


Figure K20. Shear Test Curves (PPG531 - 0.12 PPG112 Interlayer)

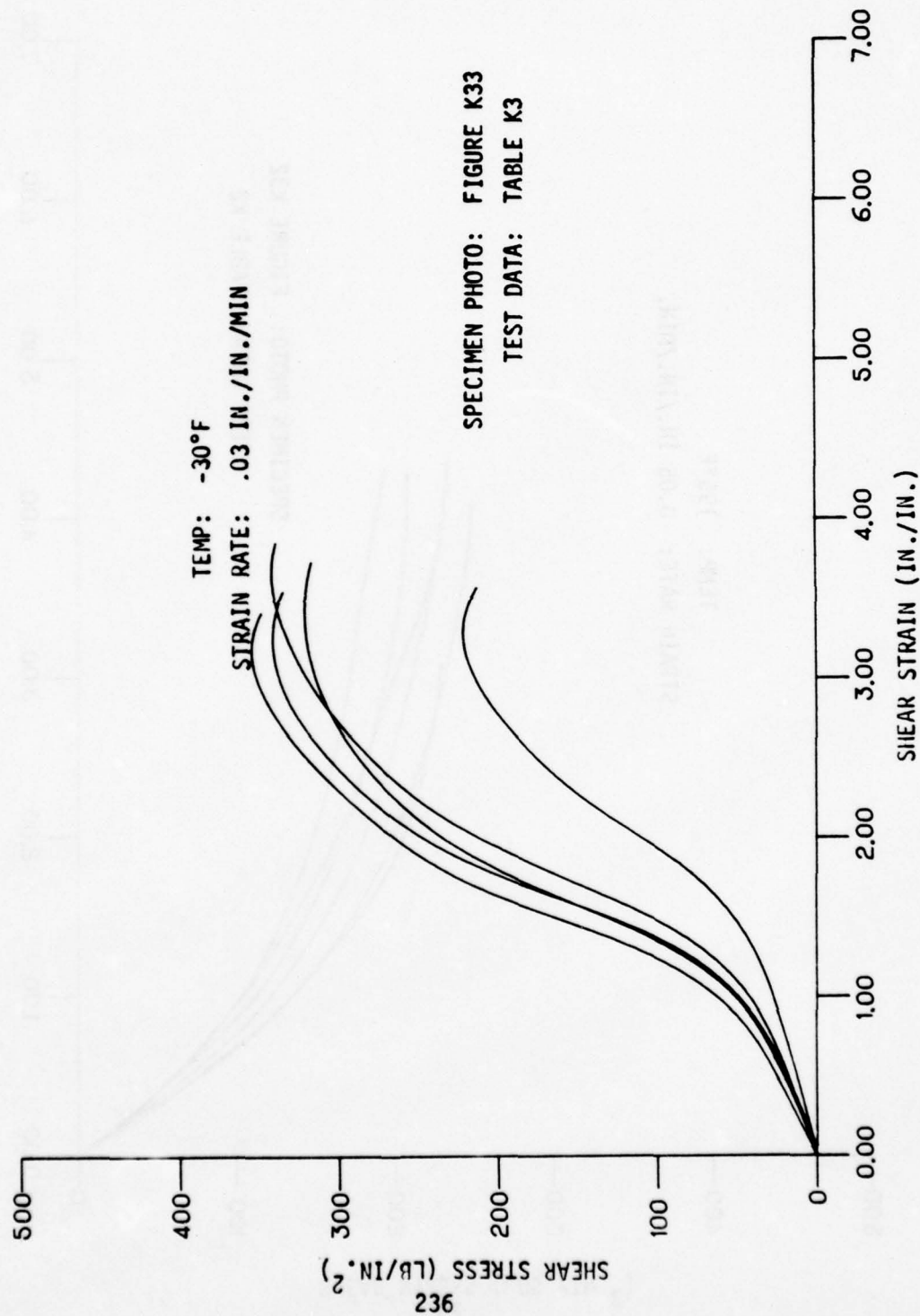


Figure K21. Shear Test Curves (SK531 - 0.12 S100 Interlayer).

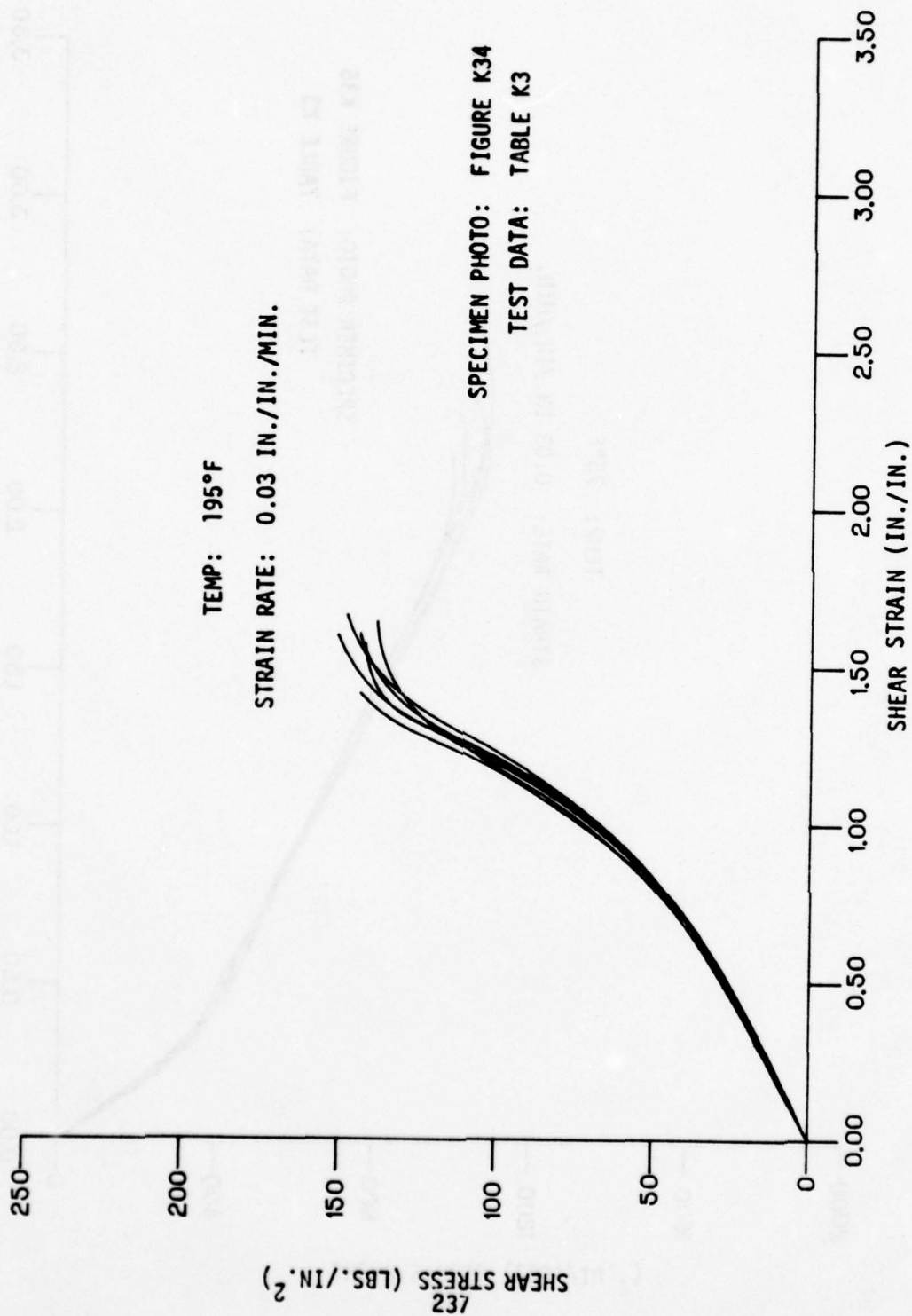


Figure K22 Shear Test Curves (SK531 - 0.1% S-100 Interlayer).

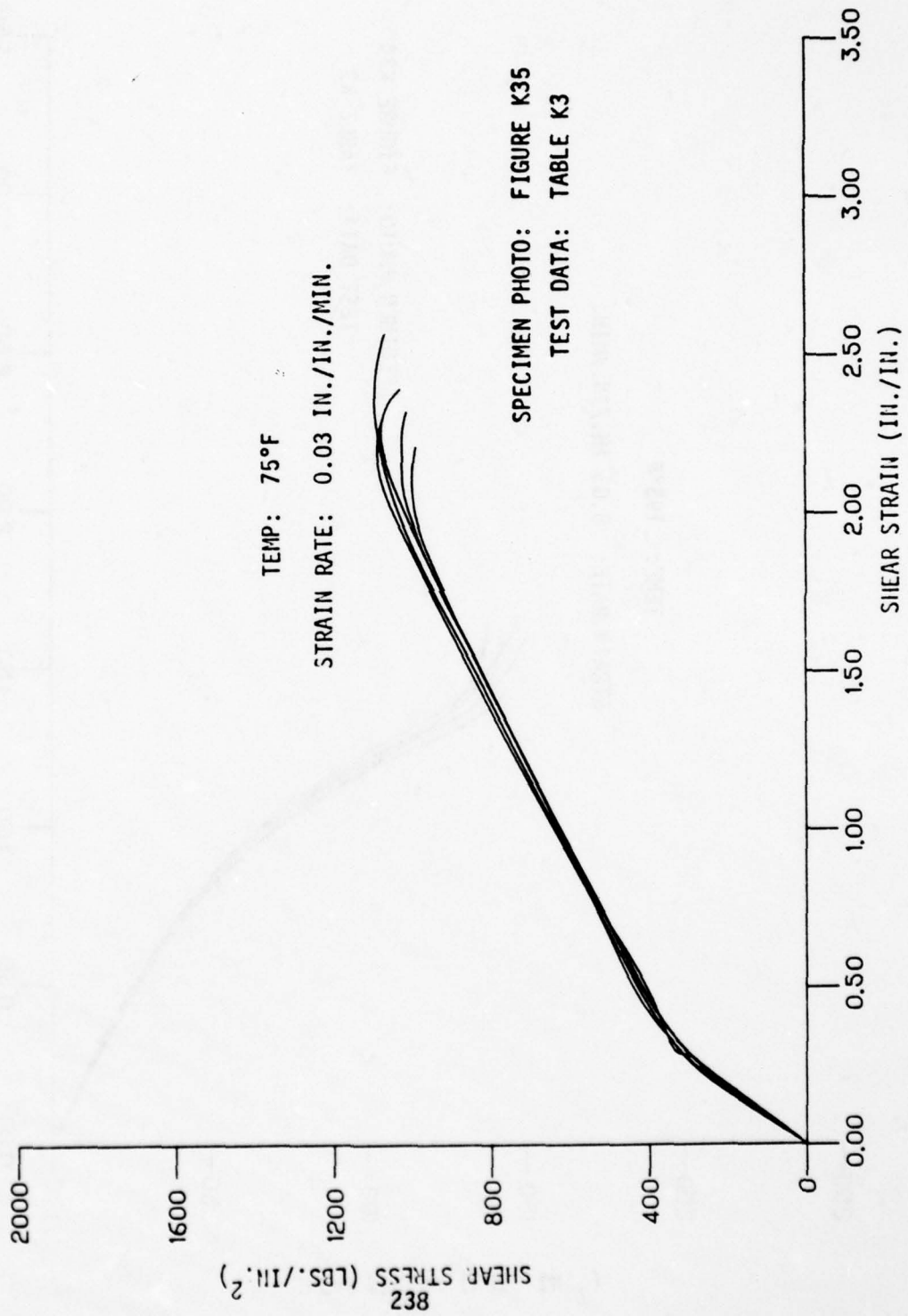


Figure K23. Shear Test Curves (SK623 - 0.12 S130 Interlayer)

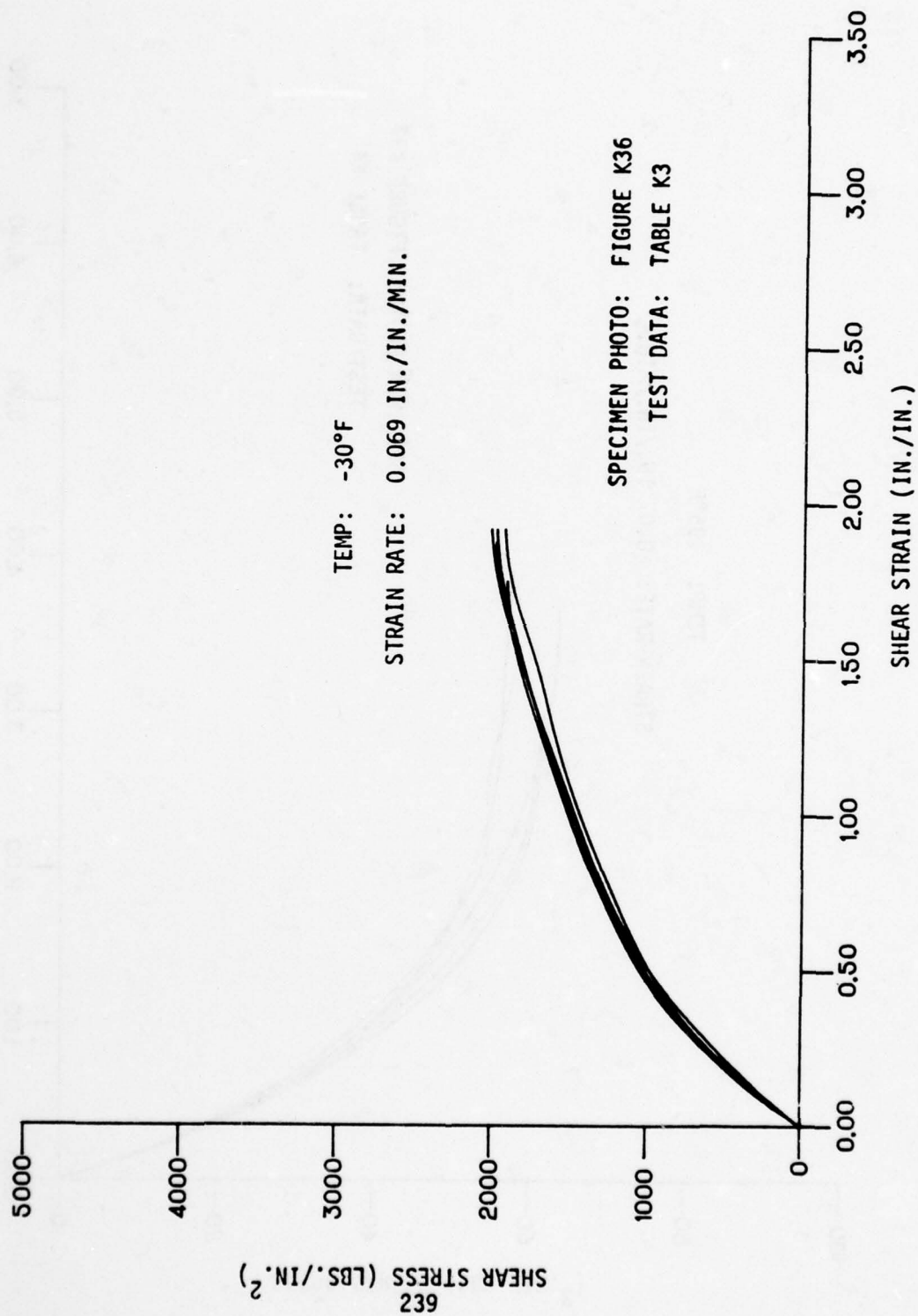


Figure K24. Shear Test Curves (SK623 - 0.12 S130 Interlayer)

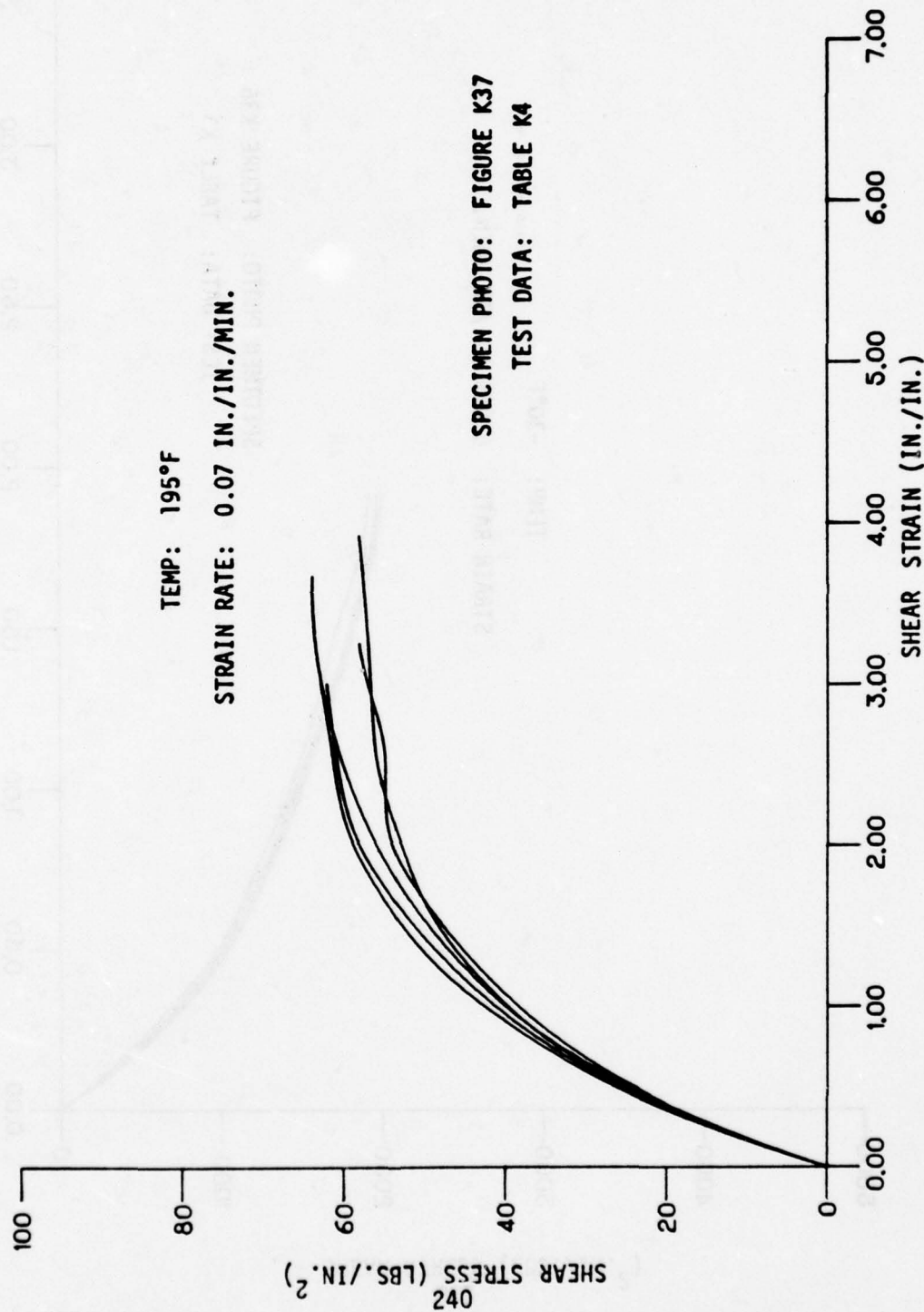


Figure K25. Shear Test Curves (SK623 - 0.12 S-130 Interlayer).

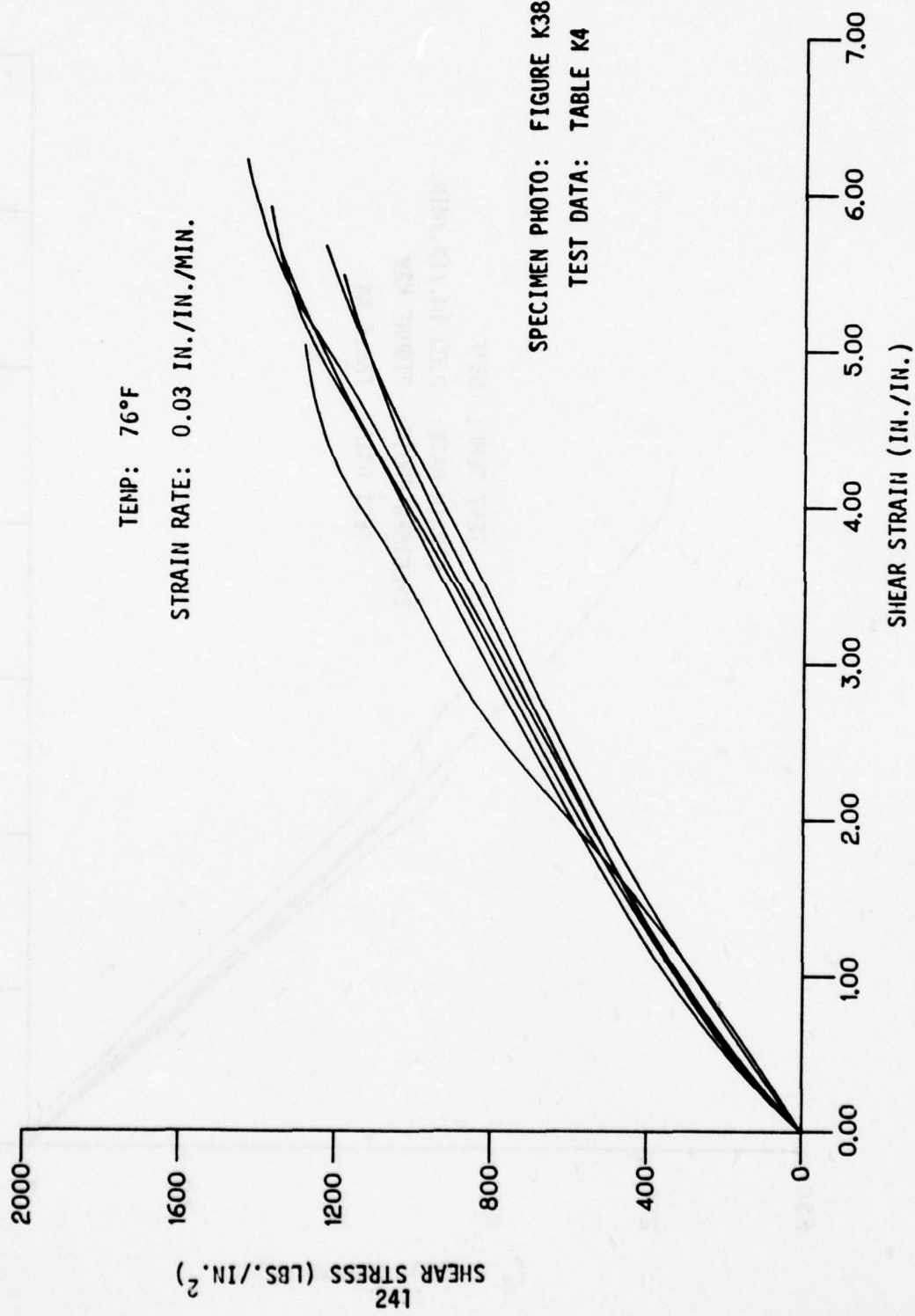


Figure K26 Shear Test Curves (SK627 - 0.03 S130 Interlayer)

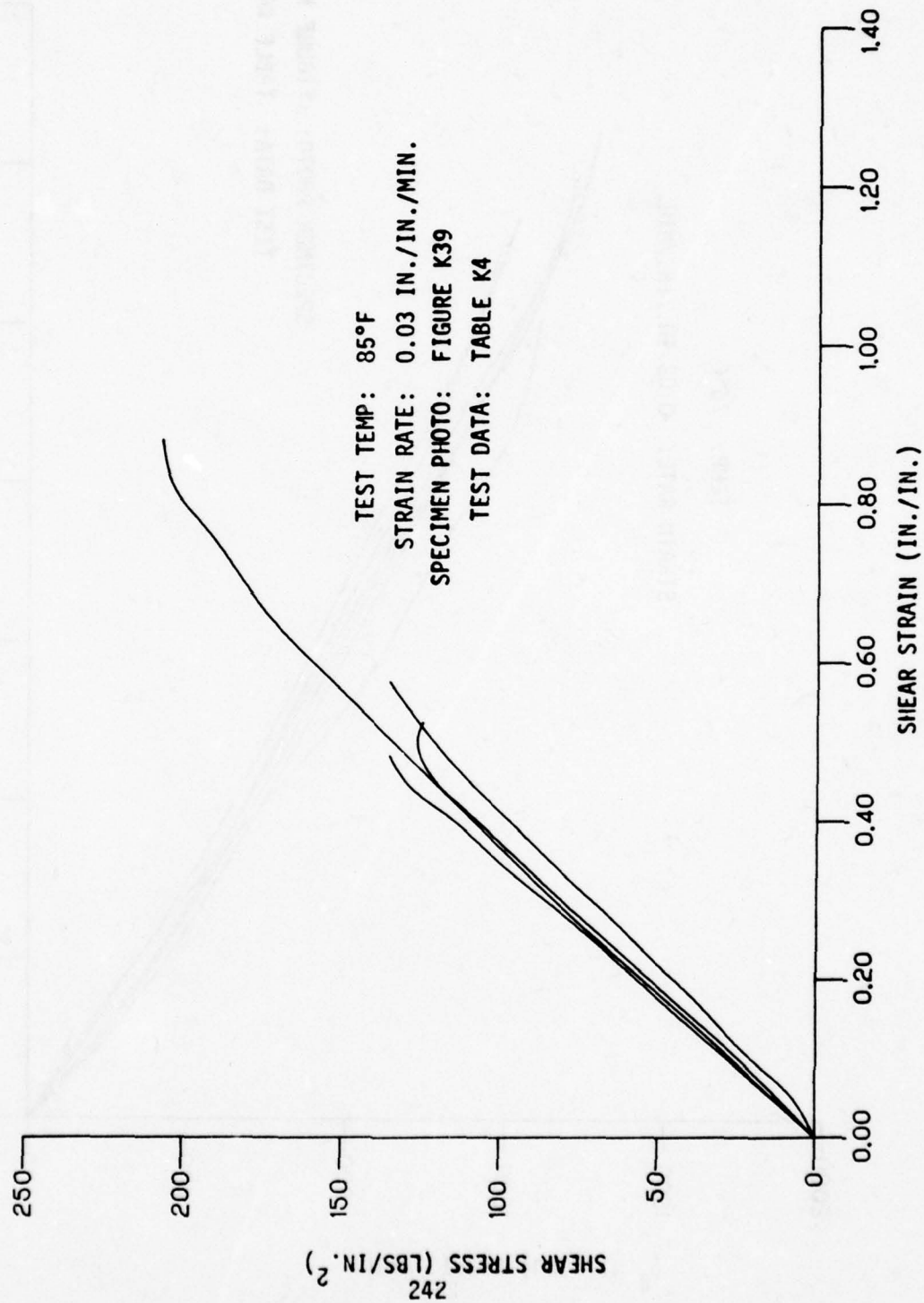


Figure K27. Shear Test Curves (SK531U - S-120 Interlayer).

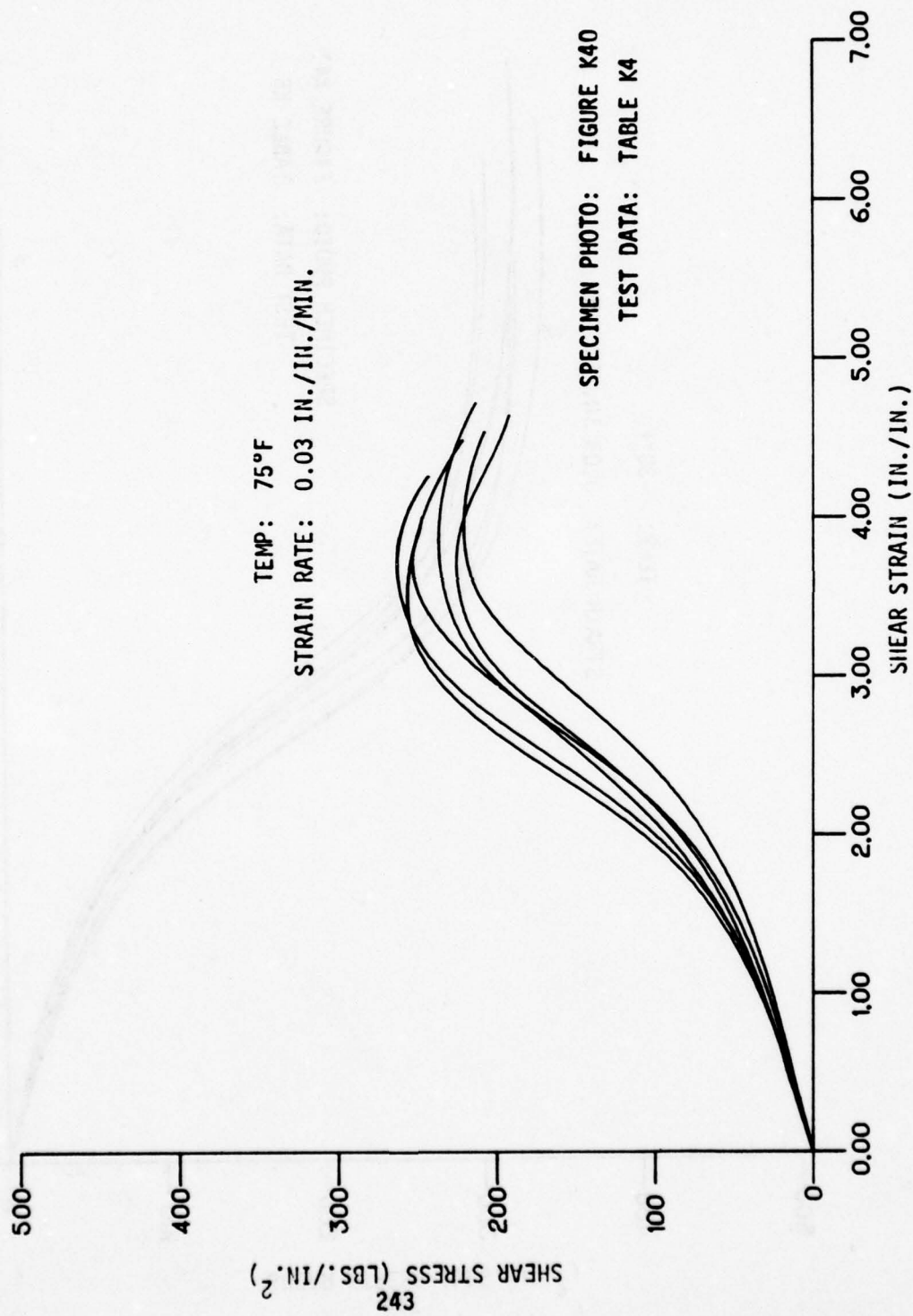


Figure K28. Shear Test Curves (SWU531 - 0.12 SS5272Y (HT) Interlayer).

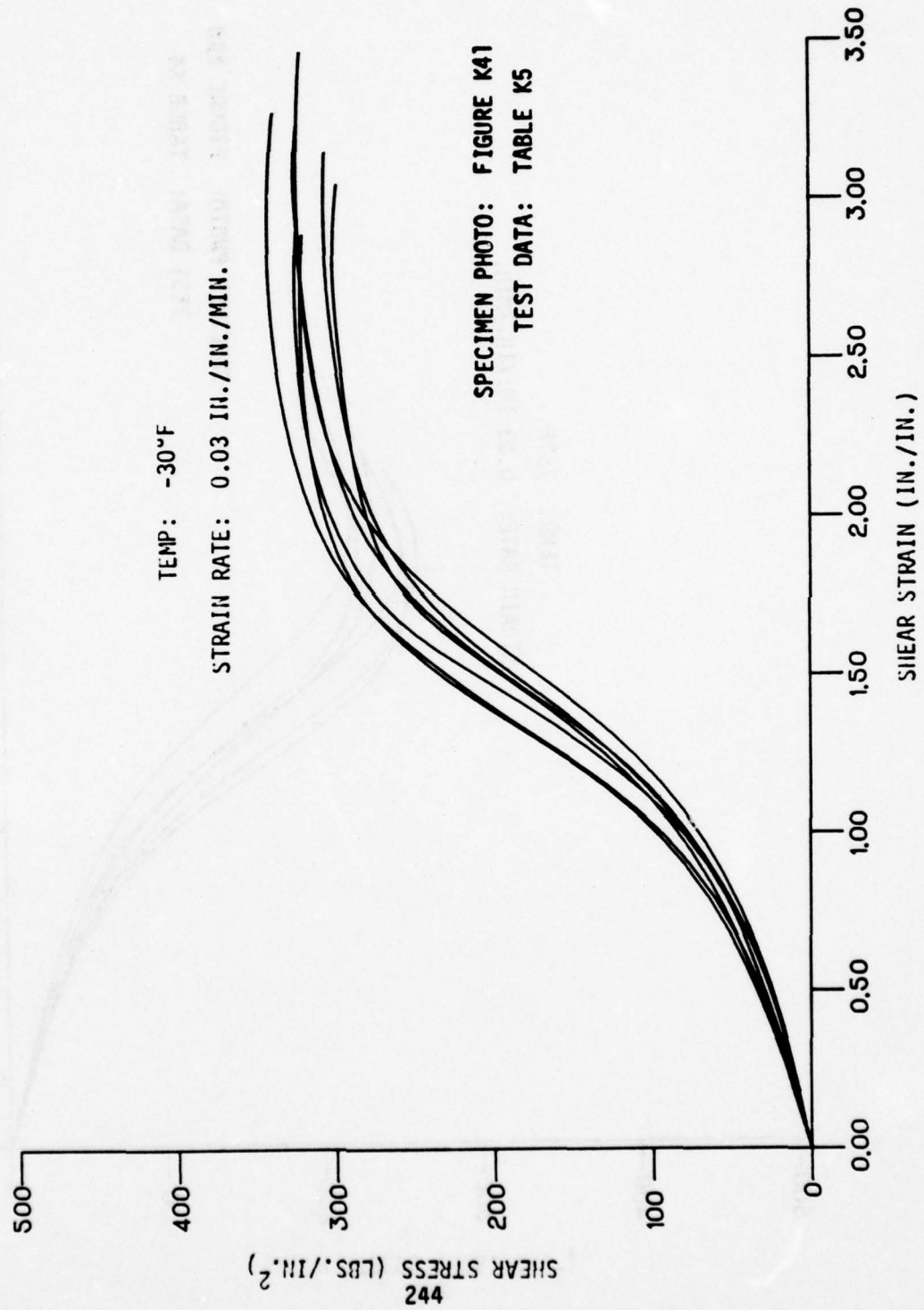


Figure K29. Shear Test Curves (SWU531 - 0.12 SS5272Y(HT) Interlayer).

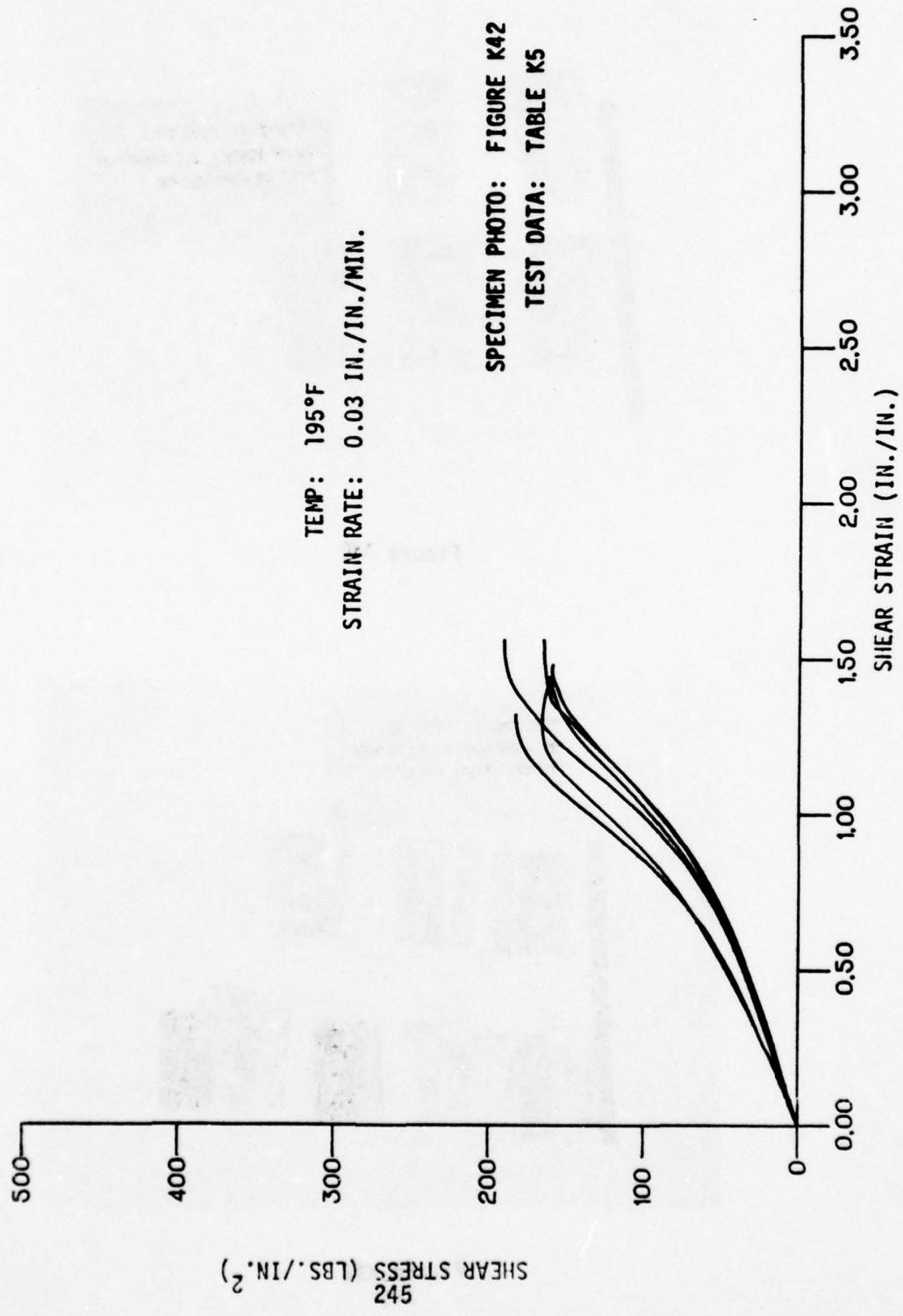


Figure K30. Shear Test Curves (SWU531 - 0.12 SS5272Y (HT) Interlayer).

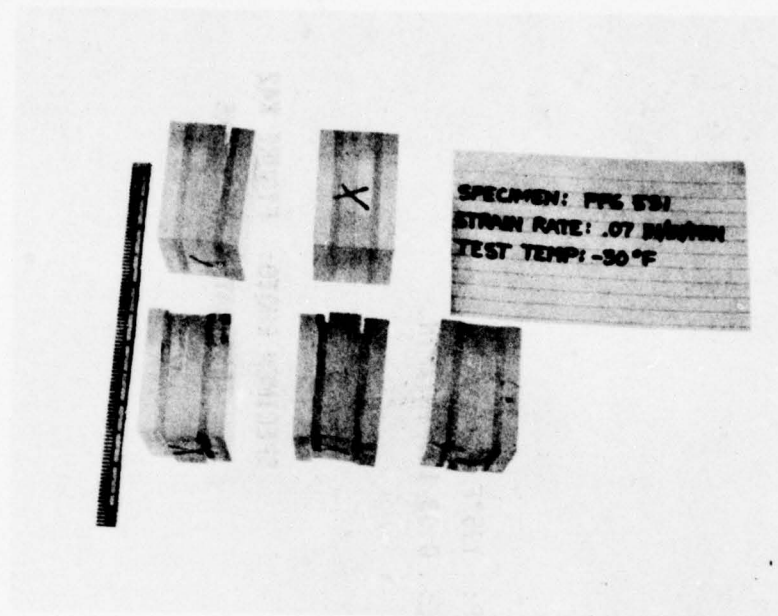


Figure K31

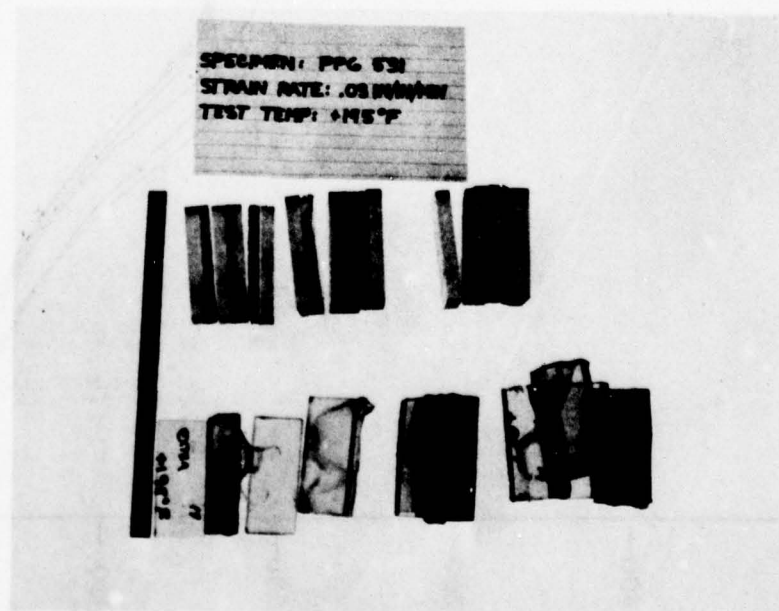


Figure K32
246

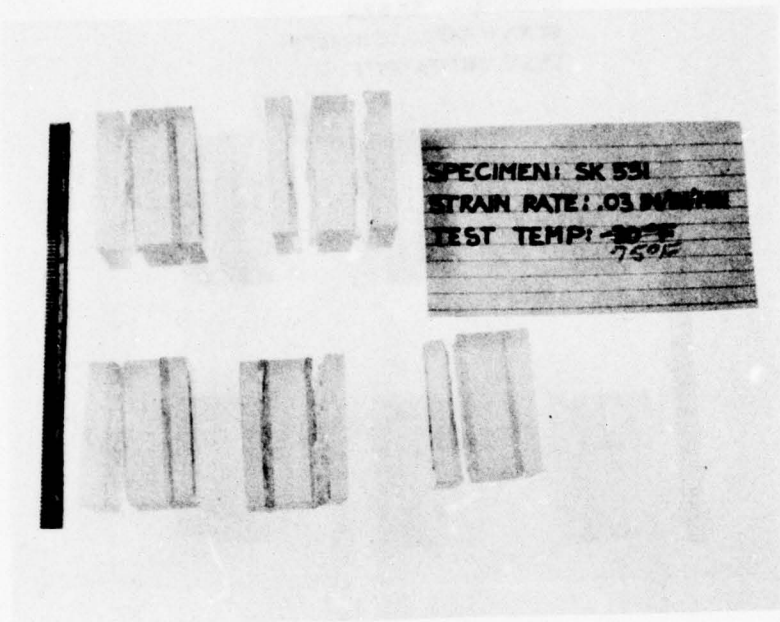


Figure K33.

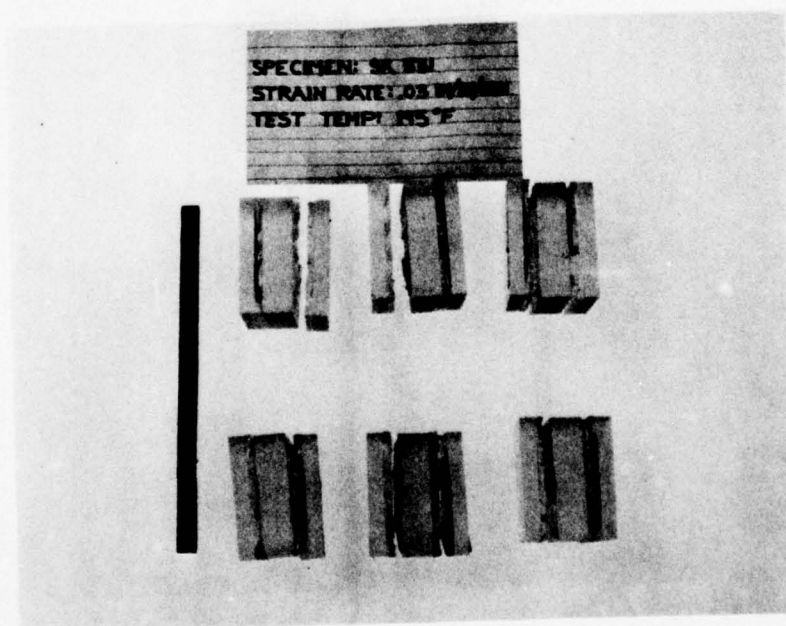


Figure K34.
247

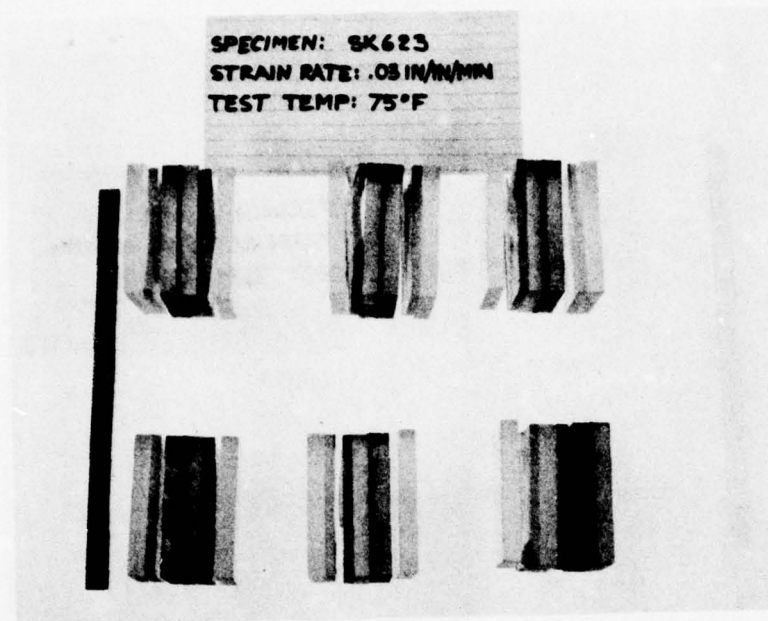


Figure K35.

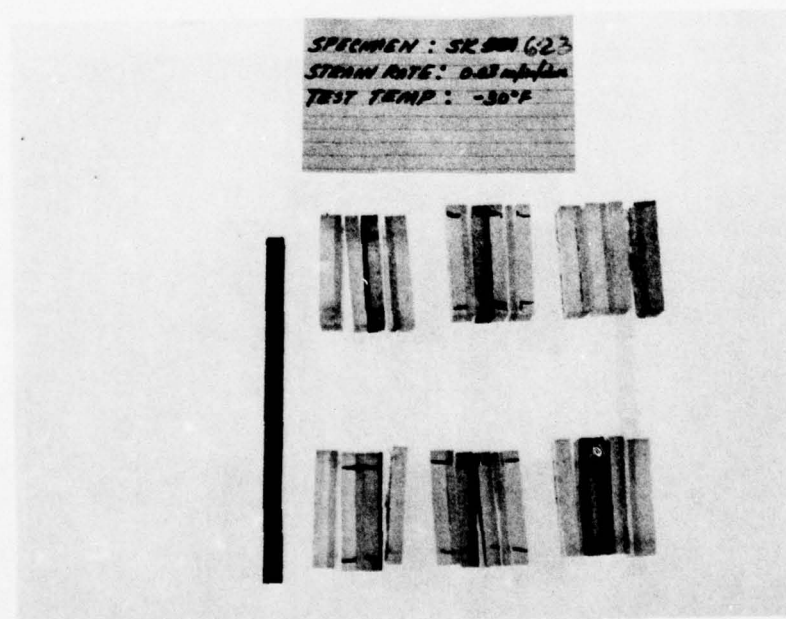


Figure K36.
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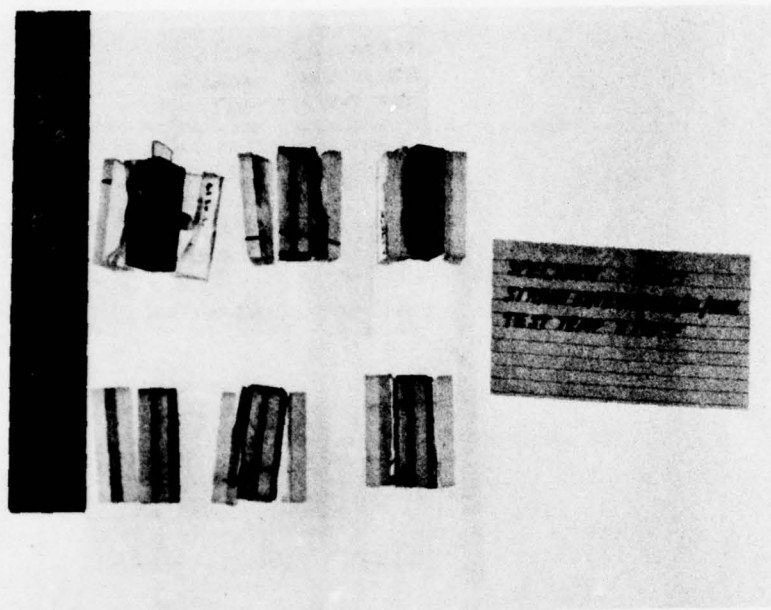


Figure K37.

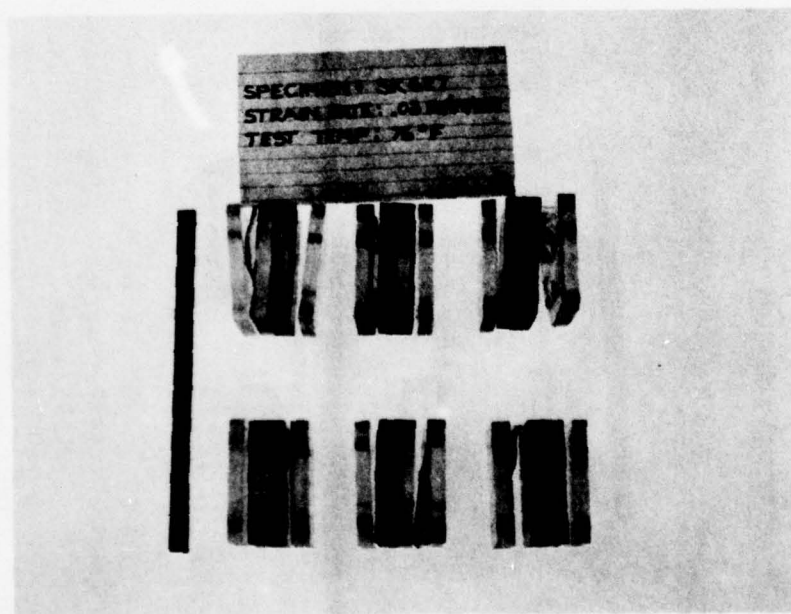


Figure K38.

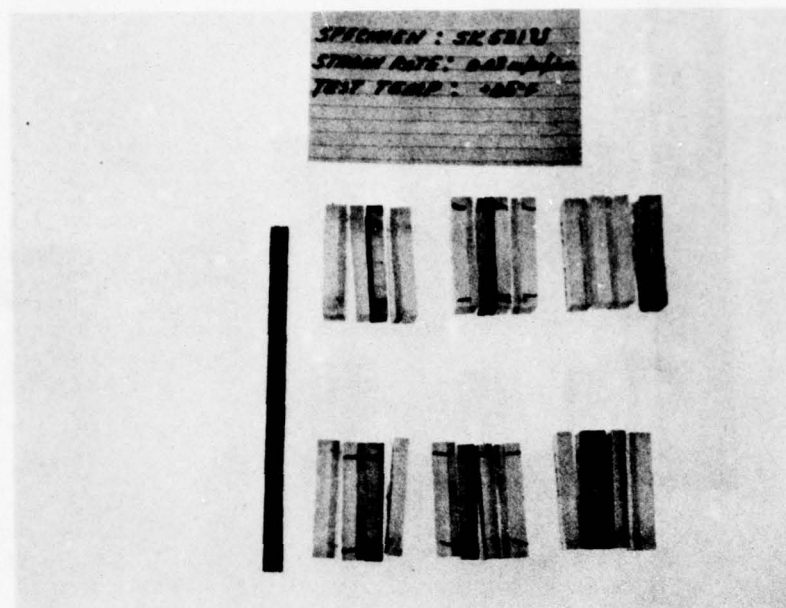


Figure K39.

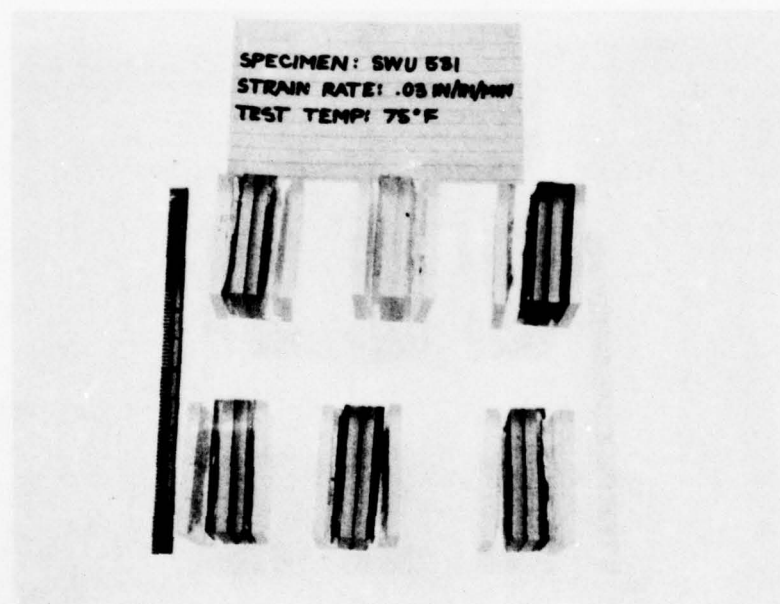


Figure K40.
250

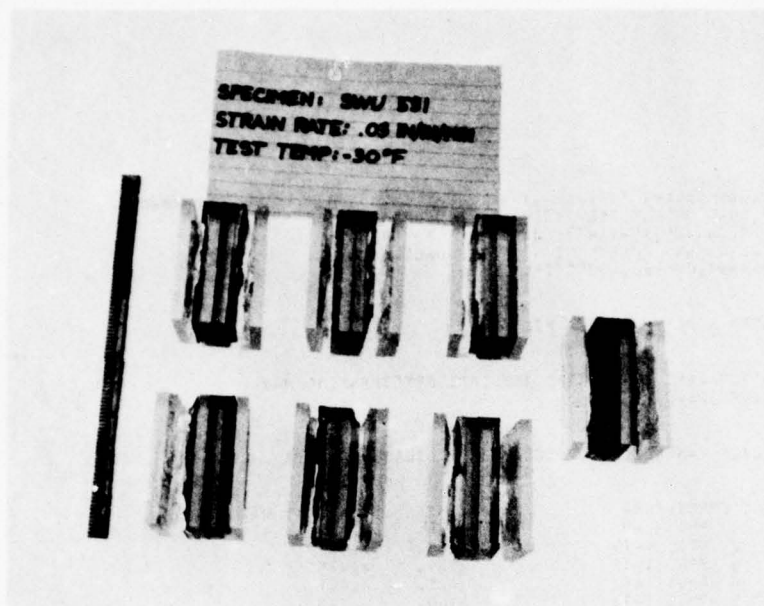


Figure K41.

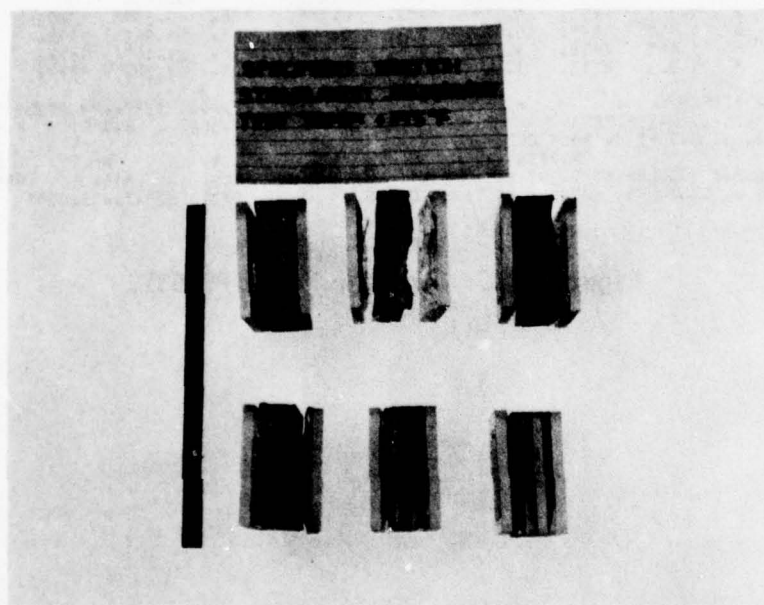


Figure K42.
251

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CA CINCINSHSHPY '01(PPG531) 1(077*23.07211.100600) 1(LOCKSS)
*** LOAD BOUNDARY RELATIONSHIP FACTOR = 0.485*6 *****
TENSILE, ENL 26, 10-13-77; J.F. HUNTER X37534
FOR 10-13-77 AND CORRECTION, CURVES ONLY.
CURVE=1, CURVE=2, POINT TENSION=2
?
1
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)
?
2
A-SCALE Y-SCALE TO CORRECT GERRER DIGITISED DATA
?
1 100
TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
1 PPG531-0          4754.      4.423
2 PPG531-10         4710.      4.412
3 PPG531-11         3739.      4.445
4 PPG531-12         3427.      4.001
5 PPG531-13         3300.      4.720
MAX STRAIN ON CURVE # OF 5= 5.342
NOT NORMAL STRAIN SSSTRESS DCPIT DCAC 4 1.000 0.0
1.4044 1242. 0.3370 0.3340
NOT NORMAL STRAIN SSSTRESS DCPIT DCAC 4 0.500 0.0
1.3442 1237. 0.3370 0.3375
1.4044 1242. 0.3370 0.3340
NOT NORMAL STRAIN SSSTRESS DCPIT DCAC 5 1.000 0.500
1.4044 1242. 0.3370 0.3340
1.4414 1327. 0.3370 0.3375
AVG A B C
PC AC. RADIAN G RADIAN G RADIAN G RADIAN G
2 0.374 1453. 0.374 444. 0.374 874. 0.374 1000.
4 0.952 1444. 0.952 533. 0.952 065. 0.952 1105.
4 1.147 1452. 1.147 404. 1.147 1036. 1.147 1374.
4 1.343 2713. 1.323 -306. 1.323 025. 1.323 1544.
STD DEV AVG A B C
MAX STRESS = 700.205 3900.423 507.402 1377.774 2353.775
STRAIN AT MAX STRESS = 0.177 4.742 1.304 3.440 4.401
STRAIN AT 2ND PT ON BASE CURVE= 0.307
SEPAR MODULUS AT 0.307 STRAIN STD DEV AVG A B C
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 1113. DELTA STRAIN= 0.0044

```

Figure K43. Computer Run - PPG531.

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ex clst(stsstr) 'd1(ppj53113) g(e77623.d0211.f0202) 1(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 *****
FEKJSC,CHG 20,10-13-77; J.P.DURKE 437544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHEAR TENSION=2
?
1
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 100
TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
1 PP531-15            224.        3.691
2 PP531-12            233.        4.362
3 PP531-13            208.        4.138
4 PP531-14            194.        4.321
5 PP531-16            249.        4.088
6 PP531-17            229.        3.091
MAX STRAIN ON CURVE 2 OF 6= 4.362
AVG
PC NO. RADIANS      G      RADIANS      G      RADIANS      G      RADIANS      G
2 0.461 143. 0.461 63. 0.461 96. 0.461 114.
4 0.884 152. 0.884 57. 0.884 96. 0.884 117.
6 1.116 160. 1.116 61. 1.116 101. 1.116 123.
8 1.231 164. 1.231 71. 1.231 109. 1.231 129.
STD DEV
MAX STRESS = 19.189 220.815 53.867 126.014 163.871
STRAIN AT MAX STRESS = 0.483 3.949 1.503 2.497 3.033
STRAIN AT 2ND PT ON BASE CURVE= 0.233
STRAIN STD DEV
SHEAR MODULUS AT 0.233 14. 144. 91. 112. 124.
CHECK OF CALC-MEAN MODULUS ON TEST CURVES= 143. DELTA STRAIN= 0.0041

```

Figure K44. Computer Run - SWU531.

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C. DIST (METERS) '41 (22531.9) 9 (47762.3, 40211.1, 40501.6) 1 (40435.0)'
**** LONG TROUGH DEFORMATION FACTOR = 0.6500 *****
THICKNESS 20, 1-11-77 J. J. LUND 237544
FOR USE IN LONG DEFORMATION CURVES ONLY.
LUND-1, CORR=2, LONG THICK=2

```

2
4
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

TIME SPACING=		MAX STRESS	STRAIN AT MAX STRESS		
1	SRSS1-1	354.	3.168		
2	SRSS1-2	341.	3.239		
3	SRSS1-3	221.	3.274		
4	SRSS1-4	342.	3.657		
5	SRSS1-5	321.	3.405		
MAX STRAIN ON CURVE 4 OF 5=		3.448			
NOT NORMAL	STRAIN	STRESS	LCRIT	DCAC	7 1.000 0.0
	2.4902	279.	0.3370	0.3406	
	2.5560	285.	0.3370	0.3451	
NOT NORMAL	STRAIN	STRESS	LCRIT	DCAC	8 1.000 0.0
	2.5560	285.	0.3370	0.3451	
	2.6063	290.	0.3370	0.3488	
	2.6574	295.	0.3370	0.3529	
	2.7054	299.	0.3370	0.3574	
	2.7625	303.	0.3370	0.3623	
	2.8166	307.	0.3370	0.3640	
	2.8720	310.	0.3370	0.3594	
NOT NORMAL	STRAIN	STRESS	LCRIT	DCAC	9 1.000 0.0
	2.8720	310.	0.3370	0.3594	
	2.9266	312.	0.3370	0.3551	
	2.9806	314.	0.3370	0.3515	
	3.0459	316.	0.3370	0.3485	
	3.1065	317.	0.3370	0.3465	
	3.1666	319.	0.3370	0.3458	
	3.2320	320.	0.3370	0.3459	
NOT NORMAL	STRAIN	STRESS	LCRIT	DCAC	10 1.000 0.0
	3.2320	320.	0.3370	0.3459	
	3.3056	320.	0.3370	0.3459	
	3.3705	321.	0.3370	0.3445	
	3.4414	321.	0.3370	0.3416	
	3.5130	321.	0.3370	0.3392	
	3.5849	321.	0.3370	0.3376	
	3.6570	321.	0.3370	0.3371	

PC NO.	AVG		A		B		C	
	RADIANS	G	RADIANS	G	RADIANS	G	RADIANS	G
2	0.773	56.	0.773	-34.	0.773	4.	0.773	24.
4	1.024	144.	1.024	-148.	1.024	-29.	1.024	35.
6	1.143	211.	1.143	-67.	1.143	34.	1.143	99.
8	1.236	244.	1.236	-11.	1.236	93.	1.236	148.

	STD DEV	AVG	A	B	C
TAX STRESS	= 54.252	314.678	0.0	98.970	187.459
STRAIN AT TAX STRESS	= 0.193	3.349	0.0	2.693	2.935
STRAIN AT END PT ON BASE CURVE= 0.568					
	STRAIN	STD DEV	A	B	C
SHEAR MODULUS AT 0.568	14.	59.	-13.	16.	32.
CHECK ON CALC-MEAN MODULUS ON TEST CURVE=			59.	DILTA STRAIN= 0.0068	

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FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=2

?

1

ENTER NUMBER OF DATA FILES

?

1

DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES,2=NO)

?

2

X-SCALE Y-SCALE TO CORRECT GERLER DIGITISED DATA

?

.1 10

TEST SPECIMENS-	MAX STRESS	STRAIN AT MAX STRESS
1 SK531-6	151.	1.600
2 SK531-8	138.	1.543
3 SK531-7	149.	1.664
4 SK531-9	143.	1.417
5 SK531-10	142.	1.574
6 SK531-11	144.	1.607

MAX STRAIN OF CURVE 3 OF 6= 1.664

PC NO.	INCHES	G	RADIANS	G	RADIANS	G	RADIANS	G
2	0.551	62.	0.551	53.	0.551	57.	0.551	59.
4	0.787	89.	0.787	73.	0.787	79.	0.787	83.
6	0.990	120.	0.990	96.	0.990	105.	0.990	111.
8	0.964	142.	0.964	119.	0.964	128.	0.964	134.

	STD DEV	AVG	A	B	C
MAX STRESS	= 4.366	143.426	72.082	107.637	126.117
STRAIN AT MAX STRESS	= 0.088	1.584	1.132	1.319	1.417

STRAIN AT 2ND PT ON BASE CURVE= 0.313

	STRAIN	STD DEV	AVG	A	B	C
SHEAR MODULUS AT 0.313	2.	50.	54.	55.	58.	

CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 60. DELTA STRAIN= 0.0049

Figure K46. Computer Run - SK531.

[illegible]

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01 0186 (sender) 01 01 02 07) 01 077623.00211.00215) 1 (telnet) *

7. T. J. McLaughlin, 100-13-771; J. J. McLaughlin, 337544

FOR SALES AND CONTRACTS ONLY
TAMMOC, Ltd. 20, 10-13-77; J.P. M. 237544
FOR SALES AND CONTRACTS ONLY

[illegible]

INDEX: OF DATA FILES

INDEX: INDEX OF AREA FILES

DO YOU WANT TO DISCARD ANY TEST EVIDENCE, TO ME?

X-LOCAL T-SOURCE CORRECT GLOBAL DIGITIZED DATA

TEST	DATE	17% STRELL	STRELLS AT 17% STRELLS
1	11-23-7	1940.	1.404
2	11-23-7	1918.	1.683
3	11-23-7	1903.	1.750
4	11-23-1 0	1976.	1.916
5	11-23-1 1	2012.	1.916
6	11-23-1 2	1924.	1.917

MAX STRAIN ON CURVE	6 OF	6=	1.917			
NOT NORMAL	STRAIN	SETBACK	DCRIP	DCAC	1	1.000 0.0

0.0368	161.	0.3100	0.3392
0.0490	134.	0.3190	0.3684

NOT MOIST	STRAIN	SETBACK	DCR	DCR	9 1.000 0.0
	1.2752	1000.	0.3190	0.337%	

NOT ADJUSTED	STRAIN	STRESS	DEBIT	CREDIT	TO 1.000 0.0
1.2752	1000.	0.3150	0.3374		

1.5745	1669.	0.3190	0.3663
1.5339	1722.	0.3190	0.3867
1.5335	1722.	0.3190	0.3867

1.3334	1729.	0.3190	0.3981
1.3327	1747.	0.3190	0.4006
1.3315	1765.	0.3190	0.4031

1.4210	1705.	0.3190	0.3971
1.4306	1761.	0.3190	0.3692

NOT PAID	DEBIT	CREDIT	ACRUE	SC/IC	TT	1.000	0.0
	1.4506	175.1	0.3120	0.3692			
	1.5781	175.1	0.3120	0.3695			

1.4743	1794.	0.3190	0.3805
1.4977	1837.	0.3190	0.3709
1.5209	1880.	0.3180	0.3610

1.5299	1520.	0.3150	0.3010
1.5446	1533.	0.3190	0.3525
1.5670	1545.	0.3190	0.3479

1.5978	1843.	0.3190	0.3473		
1.5901	1858.	0.3190	0.3463		
NOT RECORDED	STICHEL	ESTELLE	ACRYA	SCRC	12 1.000 0.0

NOT NOTED	NOTED	NOTED	NOTED	NOTED
1.5001	1.5001	0.3190	0.3460	
1.6216	1.6216	0.3190	0.3516	

1.0210	1072.	0.3190	0.3390
1.0535	1091.	0.3190	0.3390

TC NO.	MODUL	G	MODULS	G	MODULS	G	MODULS	G
2	0.145	2530.	0.145	1820.	0.145	2120.	0.145	2290.

4	0.306	2065.	0.306	1866.	0.306	2477.	0.306	2191.
6	0.529	2132.	0.529	1826.	0.529	1939.	0.529	1999.

0	0.784	1661.	0.784	1699.	0.784	1773.	0.784	1813.
			DEL	DEL	AVG	A		

1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382</
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STRESS AT MAX STRESS = 0.101 1.041 1.330 1.530 1.650
 STRESS AT 2ND PT ON STYL CURVE = 0.073 0.960 1.250 1.450 1.580

	STRT	STD DEV	AVG	X	B	C
STRT: 10/1/77	0.073	217.	2564.	1720.	2000.	2246.

CHARGE ON CHARGE-TRANSFER COMPLEXES OF THE TYPE= 2502. JENKINS, BARRON⁸ 9.0012

Figure K48. Computer Run - SK623.

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READY
ex clnt(plant) 'd1(53-14) 1(100000)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 ****
TEKSSC,CMG 20,10-13-77: J.F.RUPPE Y37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=2
?
1
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERNER DIGITISED DATA
?
1 10
TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
1 SK531-14           62.      3.000
2 SK531-15           58.      3.251
3 SK531-16           58.      3.917
4 SK531-17           64.      3.666
5 SK531-18           63.      3.001
MAX STRAIN ON CURVE 3 OF 5= 3.917
NOT NORMAL STRAIN SSTRSS DCRIT DCAC 7 1.000 0.0
2.7022 61. 0.3370 0.3487
2.7725 61. 0.3370 0.3416
AVG A R
PC NO. RADIAN G RADIAN G RADIAN G RADIAN G
2 0.096 52. 0.096 41. 0.096 45. 0.096 48.
4 1.032 51. 1.032 38. 1.032 43. 1.032 46.
6 1.190 49. 1.190 35. 1.190 41. 1.190 44.
8 1.321 46. 1.321 34. 1.321 39. 1.321 42.
STD DEV AVG A R C
MAX STRESS = 2.745 60.741 31.235 46.085 52.093
STRAIN AT MAX STRESS = 0.410 3.367 1.010 1.068 2.484
STRAIN AT 2ND PT ON BASE CURVE= 0.424
STRAIN STD DEV AVG A R C
SHEAR MODULUS AT 0.424 3. 40. 36. 41. 44.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 50. DELTA STRAIN= 0.0053

```

Figure K49. Computer Run - SK623.

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ON SING(=SSSS) 'G1(SK627) g(377000.00211.00010) 1(=SSSS)'
**** 3000 000000 INFORMATION PAGE:1 = 0.0000 *****
TRANSC:CH1 00,10-10-77; J.F.BURKE 137044
FOR SING AND COMPARISON CURVES ONLY.
SING=1,COMP=2,END TENSION=2
?
1
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAY
(1=YES, 2=NO)
?
2
2-SINGLE Y-SCALED CORRECT GERBER DIGITISED DATA
?
1 100
TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
1 SK627-1            1231.      5.030
2 SK627-2            1131.      5.213
3 SK627-3            1145.      5.033
4 SK627-4            1170.      5.317
5 SK627-5            1113.      5.201
6 SK627-6            1220.      5.665
END STRAIN ON CURVE 2 OF 6=      6.215
NOT NORMAL      STRAIN      STRESS      CORR1      CORR2      6 1.000 0.0
5.1032      1259.      0.3100      0.3649
AVG      A      B
PO NO. RADIANS      G      RADIANS      G      RADIANS      G      RADIANS      G
2 7.340      436.      7.349      300.      0.949      355.      0.949      385.
3 1.316      733.      1.316      766.      1.316      577.      1.316      630.
5 1.417      327.      1.417      300.      1.417      725.      1.417      300.
STD DEV      AVG      A      B      C
MAX STRESS      =      92.360      1290.631      530.220      870.373      1056.317
STRAIN AT MAX STRESS      =      2.402      5.657      3.623      4.440      4.306
STRAIN AT END PF ON BASE CURVE= 1.397
STRAIN      STD DEV      AVG      A      B      C
SHEAR MODULUS AT 1.397      =      100.      754.      1187.      1071.      915.
SHEAR ON END-TO-END MODULUS ON TEST CURVES=      739. DELTA STRAIN= 0.0105

```

Figure K50. Computer Run - SK627.

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ex clat(atsatr) 'd1(sk531u5) &(e77623.d0211.feg004)'
**** LOAD MODULE RELOCATION FACTOR = 0AF618 *****
TEKSC,CHG 20H, 2-16-78; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=2

?
1
1 ENTER NUMBER OF DATA FILES
?
1
1 DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
1
1 INPUT NUMBER TO BE DISCARDED & POSITION NUMBERS ONE AT A TIME
?
1
?
4
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 10

TEST SPECIMENS-	MAX STRESS	STRAIN AT MAX STRESS
1 SK531U-1	126.	0.498
2 SK531U-2	135.	0.576
3 SK531U-3	207.	0.879
5 SK531U-5	135.	0.482

MAX STRAIN ON CURVE	3 OF 4	0.879
NOT NORMAL	STRAIN SSTRESS	DCRIT DCAC
	0.6615 135.	0.3810 0.3859
	0.6806 135.	0.3810 0.3908
NOT NORMAL	STRAIN SSTRESS	DCRIT DCAC
	0.6806 135.	0.3810 0.3908
	0.6969 135.	0.3810 0.3940
	0.7138 135.	0.3810 0.3968
	0.7309 135.	0.3810 0.3993
	0.7478 135.	0.3810 0.4016
	0.7640 135.	0.3810 0.4037
	0.7790 135.	0.3810 0.4057
NOT NORMAL	STRAIN SSTRESS	DCRIT DCAC
	0.7790 135.	0.3810 0.4057
	0.7861 135.	0.3810 0.4066
	0.7932 135.	0.3810 0.4075
	0.8007 135.	0.3810 0.4083
	0.8089 135.	0.3810 0.4090
	0.8183 135.	0.3810 0.4097
	0.8293 135.	0.3810 0.4103
NOT NORMAL	STRAIN SSTRESS	DCRIT DCAC
	0.8293 135.	0.3810 0.4103
	0.8362 135.	0.3810 0.4105
	0.8436 135.	0.3810 0.4108
	0.8517 135.	0.3810 0.4110
	0.8603 135.	0.3810 0.4111
	0.8696 135.	0.3810 0.4113
	0.8794 135.	0.3810 0.4114

PC NO.	RADIANS	G	RADIANS	G	RADIANS	G	RADIANS	G
2	0.178	262.	0.178	68.	0.178	147.	0.178	190.
4	0.363	280.	0.363	143.	0.363	199.	0.363	229.
6	0.526	262.	0.526	104.	0.526	169.	0.526	203.
8	0.662	224.	0.662	-115.	0.662	23.	0.662	98.

MAX STRESS	STD DEV	AVG	A	B	C
37.518	139.549	0.0	5.335	22.278	
STRAIN AT MAX STRESS	0.185	0.609	0.0	0.080	0.125
STRAIN AT 2ND PT ON BASE CURVE	0.080				
SHEAR MODULUS AT 0.080	20.	287.	383.	384.	325.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES		282.	DELTA STRAIN	0.0016	

Figure K51. Computer Run - SK531U.

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ex dist(stress) 'ol(swu53101) q(a77623,de211,(en513) 1(tenrec)'
**** LOAD MODULUS RELOCATION FACTOR = MAX56 *****
ENRSC,END 20,14-15-77; J.F. BURKE A37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=2
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ex cirt(stater) 'ul(swu53107) a(e77623.du211.feq066) 1(tekasc)'
PLATE, CNG 20, 10-11-77; J.P. DIKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1, CNG=2, SHORT TENSILE=2
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ENTER NUMBER OF DATA FILES
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DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)
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2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
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1 100
100 SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
1 SWJ531-7          325.      2.726
2 SWJ531-8          320.      2.815
3 SWJ531-9          325.      3.069
4 SWJ531-10         321.      2.663
5 SWJ531-11         324.      3.088
6 SWJ531-12         342.      2.908
7 SWJ531-13         305.      2.974
MAX STRAIN ON CURVE 5 OF 7= 3.458
      AVG
PC NO. RADIANS      G      RADIANS      G      RADIANS      G      RADIANS      G
2 0.366 59. 0.386 20. 0.386 36. 0.386 44.
4 0.881 143. 0.881 59. 0.881 93. 0.881 112.
6 1.036 242. 1.036 148. 1.036 186. 1.036 207.
8 1.183 265. 1.188 210. 1.188 233. 1.188 245.
      STD DEV      AVG
MAX STRESS      = 13.627 319.976 235.281 274.943 293.496
STRAIN AT MAX STRESS = 0.165 2.891 2.127 2.437 2.606
STRAIN AT 2ND PT ON BASE CURVE= 0.199
      STRAIN      STD DEV      AVG
SHEAR MODULUS AT 0.199 9. 57. 17. 33. 42.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 57. DELTA STRAIN= 0.0033

```

Figure K53. Computer Run - SWU531.

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TEST SPECIMENS-			MAX STRESS		STRAIN AT MAX STRESS	
1	SAU531-16		163.		1.321	
2	SAU531-17		161.		1.442	
3	SAU531-16		190.		1.560	
4	SAU531-15		159.		1.461	
5	SAU531-14		165.		1.560	
6	SAU531-13		166.		1.290	
MAX STRAIN ON CURVE 3 OF 6=			1.561			
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	1 1.000 0.0	
	0.0208	1.	0.3190	0.3253		
	0.0416	3.	0.3190	0.3210		
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	3 1.000 0.0	
	0.4453	32.	0.3190	0.3204		
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	4 1.000 0.0	
	0.4453	32.	0.3190	0.3204		
	0.4763	34.	0.3190	0.3266		
	0.5072	36.	0.3190	0.3289		
	0.5380	39.	0.3190	0.3301		
	0.5683	42.	0.3190	0.3311		
	0.5982	44.	0.3190	0.3313		
	0.6274	47.	0.3190	0.3264		
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	5 1.000 0.0	
	0.6274	47.	0.3190	0.3264		
	0.6469	49.	0.3190	0.3270		
	0.6661	51.	0.3190	0.3285		
	0.6849	53.	0.3190	0.3285		
	0.7035	55.	0.3190	0.3264		
	0.7218	57.	0.3190	0.3223		
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	21 1.000 0.0	
	1.4933	166.	0.3190	0.3190		
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	22 1.000 0.0	
	1.4933	166.	0.3190	0.3190		
	1.4971	166.	0.3190	0.3196		
	1.5009	166.	0.3190	0.3208		
	1.5048	166.	0.3190	0.3204		
	1.5087	166.	0.3190	0.3206		
	1.5125	166.	0.3190	0.3208		
	1.5164	166.	0.3190	0.3210		
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	23 1.000 0.0	
	1.5164	166.	0.3190	0.3210		
	1.5199	166.	0.3190	0.3210		
	1.5233	166.	0.3190	0.3211		
	1.5268	166.	0.3190	0.3211		
	1.5303	166.	0.3190	0.3211		
	1.5337	166.	0.3190	0.3211		
	1.5372	166.	0.3190	0.3212		
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	24 1.000 0.0	
	1.5372	166.	0.3190	0.3212		
	1.5411	166.	0.3190	0.3214		
	1.5450	166.	0.3190	0.3216		
	1.5488	166.	0.3190	0.3219		
	1.5527	166.	0.3190	0.3223		
	1.5566	166.	0.3190	0.3228		
	1.5604	166.	0.3190	0.3233		
AVG			A	B	C	
PC NO.	RADIANS	G	RADIANS	G	RADIANS	G
2	0.291	76.	0.291	16.	0.291	53.
4	0.560	96.	0.560	16.	0.560	63.
6	0.688	109.	0.688	14.	0.688	73.
8	0.770	130.	0.770	12.	0.770	86.
STD DEV			AVG			
MAX STRESS			12.015		169.014	
STRAIN AT MAX STRESS			0.115		1.439	
STRAIN AT 2ND PT ON BASE CURVE=			0.126			
SHEAR MODULUS AT 0.126			9.		70.	
CHECK ON CALC-SHEAR MODULUS ON TEST CURVES=			72.		DELTA STRAIN= 0.0025	

Figure K54. Computer Run - SWU531.

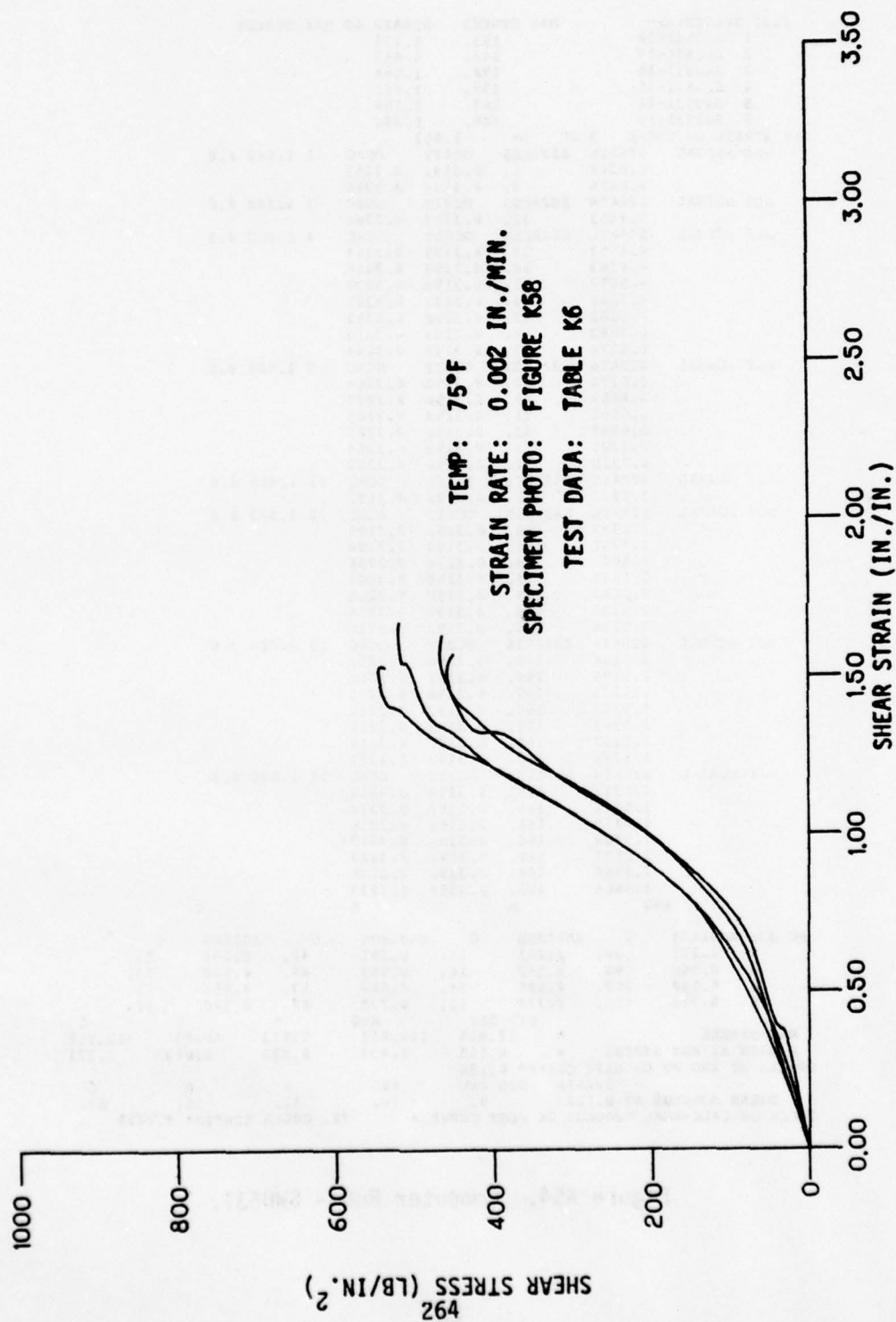


Figure K55. Shear Test Curves (SMU537-0.10 SS5272Y (HT) Interlayer).

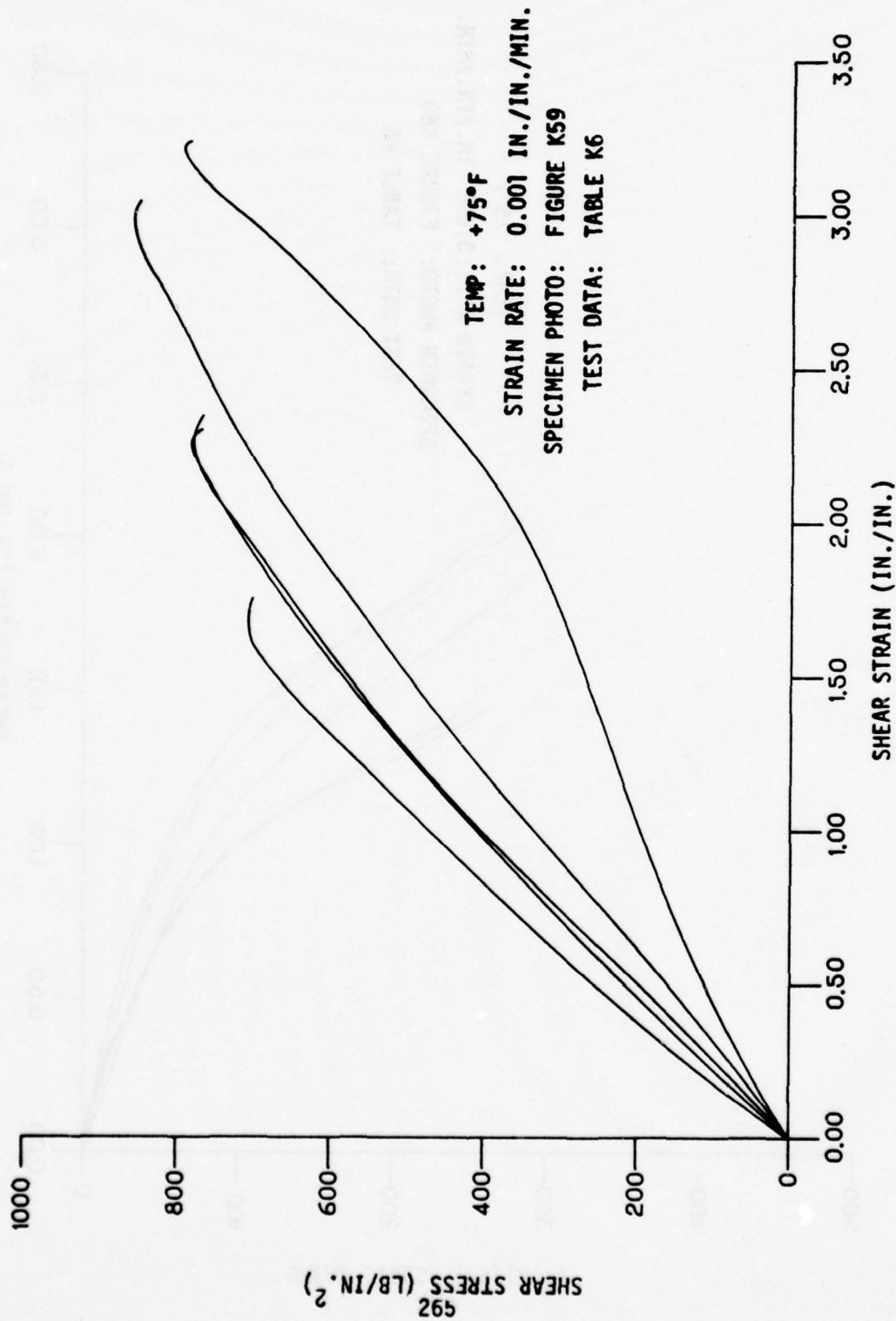


Figure K56. Shear Test Curves (PPG539-0.125 PPG-112 Interlayer).

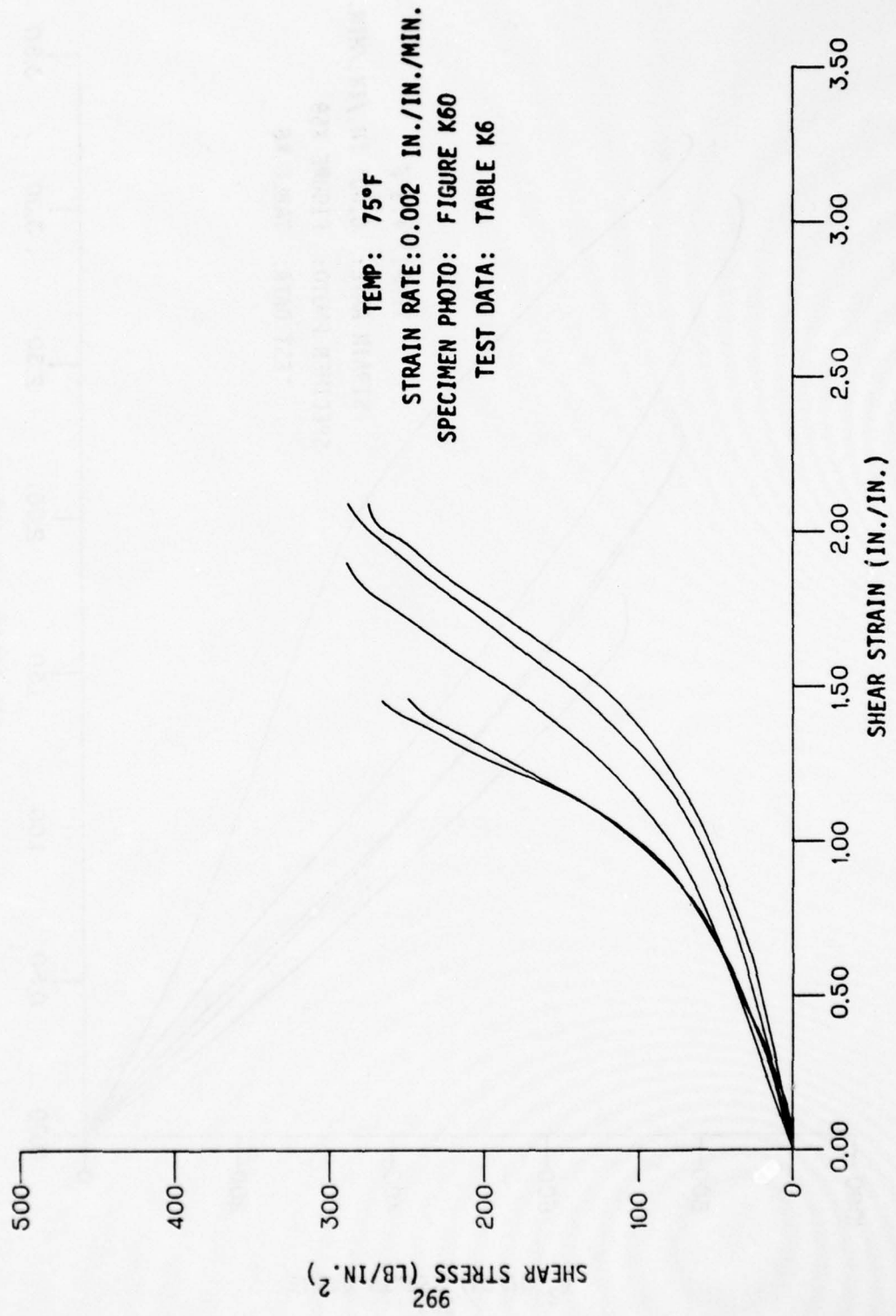


Figure K57. Shear Test Curves (SK535-0.12 S-100 Interlayer).

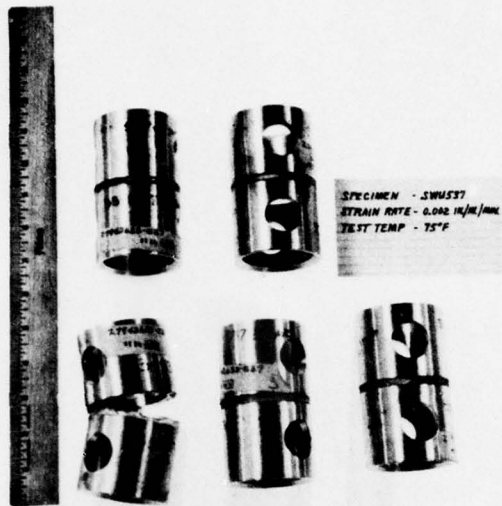


Figure K58.



Figure K59.



Figure K60.

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st:ststr 'dl:swu53702' g:e77623.d0211.fog018) n(swu53702)'
*** LOAD MODULE RELOCATION FACTOR = 00F618 *****
TS:SEC.CMG 229, 2-16-73, J.F.BURKE XJ7544
*** SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=2
?
ENTER NUMBER OF DATA FILES
?
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1
TEST SPECIMENS-      MAX STRESS  STRAIN AT MAX STRESS
1  SWU537-2          518.      1.633
2  SWU537-3          466.      1.560
3  SWU537-4          544.      1.509
4  SWU537-5          457.      1.507
MAX STRAIN ON CURVE  1 OF 4= 1.663
PC NO.  RADIANS  G  RADIANS  G  RADIANS  G  RADIANS  G
2  0.392  134.  0.392  5.  0.392  58.  0.392  86.
4  0.637  184.  0.637  -36.  0.637  54.  0.637  102.
6  0.778  289.  0.778  12.  0.778  125.  0.778  186.
8  0.864  395.  0.864  102.  0.864  222.  0.864  286.
MAX STRESS          STD DEV  AUG  A  B  C
STRAIN AT MAX STRESS  41.584  495.680  68.129  235.874  367.322
STRAIN AT 2ND PT ON BASE CURVE= 0.225  0.059  1.552  1.137  1.307  1.398
SHEAR MODULUS AT 0.225  STRAIN  STD DEV  AUG  A  B  C
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 34. 131. -10. 48. 79.
123. DELTA STRAIN= 0.0036

```

Figure K61. Computer Run - SWU537.

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1st: 1ststr: 'dl:ppg53901' g(e77823.d0211.f09019) a(ppg53901)
*** LOAD MODULE RELOCATION FACTOR = 0AF618 *****
TERMINAL: CMG 206, 2-16-78; J.F. BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1, COMP=2, SHORT TENSION=2
?
? ENTER NUMBER OF DATA FILES
?
? DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
? (1=YES, 2=NO)
?
? X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 100
TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
1  PPG539-1          793.          3.208
2  PPG539-2          707.          1.679
3  PPG539-3          858.          2.974
4  PPG539-4          782.          2.249
5  PPG539-5          779.          2.254
MAX STRAIN ON CURVE 1 OF 5- 3.234
NOT NORMAL STRAIN SSTRESS DCRIT DCAC 5 1.000 0.0
2.0627 664. 0.3370 0.3454
2.1416 666. 0.3370 0.3589
2.2139 784. 0.3370 0.3733
2.2810 787. 0.3370 0.3610
2.3446 787. 0.3370 0.3435
NOT NORMAL STRAIN SSTRESS DCRIT DCAC 6 1.000 0.0
2.3446 787. 0.3370 0.3435
AUG A B C
PC NO. RADIANS G RADIANS G RADIANS G RADIANS G
2 0.755 455. 0.755 -297. 0.755 9. 0.755 173.
4 1.082 561. 1.082 -283. 1.082 60. 1.082 245.
6 1.216 603. 1.216 183. 1.216 354. 1.216 446.
8 1.263 619. 1.263 376. 1.263 474. 1.263 528.
S'D DEV AUG A B C
MAX STRESS 53.720 706.749 0.0 0.0 153.780
STRAIN AT MAX STRESS 0.617 2.473 0.0 0.0 1.147
STRAIN AT 2ND PT ON BASE CURVE= 0.471
SHEAR MODULUS AT 0.471 127. 443. -256. 28. 181.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 444. DELTA STRAIN= 0.0063

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Figure K62. Computer Run - PPG539.

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ex clat(atastr) 'd1(sk53501) g(077623.40211.fog011) a(sk53501)'
IKJ587181 INVALID KEYWORD, 'A(SK53501)'
IKJ56703A REENTER -

READY
ex clat(atastr) 'd1(sk53501) g(077623.40211.fog011) a(sk53501)'
===== LOAD MODULE RELOCATION FACTOR = 0AF618 =====
TEKSCC, CHG 289, 8-16-78, J.F. BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1, COMP=2, SHORT TENSION=2

1
1 ENTER NUMBER OF DATA FILES
1
1 DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)
2
2 X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
1 10

TEST SPECIMENS-	MAX STRESS	STRAIN AT MAX STRESS
1 SK535-1	266.	1.453
2 SK535-2	249.	1.461
3	288.	2.091
4 SK535-4	275.	2.090
5 SK535-5	288.	1.000

PC NO.	RADIANS	G	RADIANS	G	RADIANS	G	RADIANS	G
2	0.354	58.	0.354	-12.	0.354	10.	0.354	31.
4	0.588	71.	0.588	-18.	0.588	12.	0.588	38.
6	0.769	97.	0.769	-49.	0.769	10.	0.769	42.
8	0.898	151.	0.898	-173.	0.898	-41.	0.898	30.

MAX STRESS	STD DEV	AUG	A	B	C
16.417	243.832	0.0	11.520	32.599	
0.322	1.799	0.0	0.703	1.017	

STRAIN AT MAX STRESS	STRAIN AT 2ND PT ON BASE CURVE	STRAIN	STD DEV	AUG	A	B	C
0.216	0.216	15.	62.	25.	40.	48.	

SHEAR MODULUS AT 0.216
CHECK ON CALC-MEAN MODULUS ON TEST CURVES- 61. DELTA STRAIN= 0.0025

Figure K63. Computer Run - SK535.

TABLE K1. SHEAR TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA						TEST CALCULATION DATA			
	TEST TEMP (°F)	LOAD RATE (IN/MIN)	THICKNESS (IN)	GAGE LENGTH (IN)	SHEAR AREA (IN ²)	RUPTURE LOAD (LBS)	FAILURE MODE	STRAIN RATE (IN/IN/MIN)	RUPTURE STRESS (LBS/IN ²)	RUPTURE STRAIN (IN/IN)
PPG529-1	75	.050	.060	2.00	8.000	2430	Bond	.025	304	1.280
PPG529-2	75	.050	.060	2.00	8.000	3310	Bond	.025	414	1.080
PPG529-3	75	.050	.060	2.00	8.000	2730	Bond	.025	341	0.760
PPG529-4	75	.050	.060	2.00	8.000	2220	Bond	.025	278	0.600
PPG529-5	75	.050	.060	2.00	8.000	3125	Bond	.025	392	0.694
PPG531-2	75	.050	.125	0.75	2.963	9000	Shear	.067	3038	6.320
PPG531-3	75	.050	.125	0.75	2.956	9480	Shear	.067	3207	6.144
PPG531-4	75	.050	.125	0.75	2.872	7850	Shear	.067	2733	5.280
PPG531-5	75	.050	.125	0.75	2.936	7925	Shear	.067	7925	5.920
PPG531-6	75	.050	.125	0.75	2.849	8018	Shear	.067	2869	5.640
PPG531-7	75	.050	.125	0.75	2.907	7950	Shear	.067	2735	6.120
PPG533-3C	75	.050	.125	0.75	1.520	4675	Shear	.067	3076	5.106
PPG533-4B	75	.050	.125	0.75	1.295	4300	Shear	.067	3320	5.285
PPG533-4C	75	.050	.125	0.75	1.300	4800	Shear	.067	3692	5.130
PPG533-4D	75	.050	.125	0.75	1.170	4675	Shear	.067	3996	5.477
PPG533-5B	75	.050	.125	0.75	1.190	4650	Shear	.067	3908	5.303
PPG533-5C	75	.050	.125	0.75	1.520	5000	Shear	.067	3289	5.963
PPG533-5D	75	.050	.125	0.75	0.906	4700	Shear	.067	5188	5.464
SK531-1	75	.050	.125	2.000	5.994	1004	Shear	.025	168	2.400
SK531-2	75	.050	.125	2.000	5.992	952	Shear	.025	159	2.360
SK531-3	75	.050	.125	2.000	5.918	992	Shear	.025	168	2.560
SK531-4	75	.050	.125	2.000	5.890	984	Shear	.025	167	2.640
SK531-5	75	.050	.125	2.000	5.889	980	Shear	.025	166	2.560
SK531-6	75	.050	.125	2.000	5.941	948	Shear	.025	159	2.480

TABLE K2. SHEAR TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA						TEST CALCULATION DATA			
	TEST TEMP (°F)	LOAD RATE (IN/MIN)	THICKNESS (IN)	GAGE LENGTH (IN)	SHEAR AREA (IN ²)	RUPTURE LOAD (LBS)	FAILURE MODE	STRAIN RATE (IN/IN/MIN)	RUPTURE STRESS (LBS/IN ²)	RUPTURE STRAIN (IN/IN)
SMU533/108-7	75	.080	.100	1.500	5.955	600	Bond	.053	101	1.450
SMU533/108-8	75	.080	.100	1.500	6.038	400	Bond	.053	66	0.312
SMU533/108-9	75	.080	.100	1.500	6.080	370	Bond	.053	61	0.281
SMU533/108-10	75	.080	.100	1.500	6.016	230	Bond	.053	39	0.375
SMU533/108-11	75	.080	.100	1.500	5.971	430	Bond	.053	72	0.450
SMU533/108-12	75	.080	.100	1.500	6.086	465	Bond	.053	76	0.425
SMU533/107-7	75	.080	.120	1.500	6.000	600	Bond	.053	100	1.021
SMU533/107-8	75	.080	.120	1.500	5.959	525	Bond	.053	88	0.758
SMU533/107-9	75	.080	.120	1.500	6.035	450	Bond	.053	75	0.708
SMU533/107-10	75	.080	.120	1.500	6.090	450	Bond	.053	74	0.646
SMU533/107-11	75	.080	.120	1.500	6.090	420	Bond	.053	69	0.667
PG531-9	-30	.050	.120	0.700	1.961	9330	Bond	.710	4758	4.625
PG531-10	-30	.050	.120	0.700	1.903	8950	Bond	.710	4703	4.583
PG531-11	-30	.050	.120	0.700	1.897	7100	Bond	.710	3742	4.958
PG531-12	-30	.050	.120	0.700	1.979	6800	Bond	.710	3436	4.958
PG531-13	-30	.050	.120	0.700	1.880	6200	Bond	.710	3298	4.750
PG531-13	195	.050	.125	1.00	3.798	790	Shear	.050	208	4.280
PG531-14	195	.050	.125	1.00	3.833	765	Shear	.050	200	4.720
PG531-15	195	.050	.125	1.00	2.854	640	Shear	.050	224	3.680
PG531-16	195	.050	.125	1.00	3.768	940	Shear	.050	250	4.080
PG531-17	195	.050	.125	1.00	3.440	790	Shear	.050	230	3.080
PG531-18	195	.050	.125	1.00	2.911	680	Shear	.050	234	4.360

TABLE K3. SHEAR TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA						TEST CALCULATION DATA			
	TEST TEMP (°F)	LOAD RATE (IN/MIN)	THICKNESS (IN)	GAGE LENGTH (IN)	SHEAR AREA (IN ²)	RUPTURE LOAD (LBS)	FAILURE MODE	STRAIN RATE (IN/IN/MIN)	RUPTURE STRESS (LBS/IN ²)	RUPTURE STRAIN (IN/IN)
SK531-1	-30	.050	.125	1.50	6.026	2150	Shear	.033	357	3.168
SK531-2	-30	.050	.125	1.50	6.026	2075	Shear	.033	344	3.239
SK531-3	-30	.050	.125	1.50	6.066	1350	Shear	.033	223	3.274
SK531-4	-30	.050	.125	1.50	6.056	2000	Shear	.033	343	3.657
SK531-5	-30	.050	.125	1.50	6.023	1950	Shear	.033	324	3.405
SK531-6	195	.050	.125	1.50	6.024	910	Shear	.033	151	1.600
SK531-7	195	.050	.125	1.50	5.966	865	Shear	.033	145	1.664
SK531-8	195	.050	.125	1.50	6.029	835	Shear	.033	138	1.643
SK531-9	195	.050	.125	1.50	6.017	860	Shear	.033	143	1.417
SK531-10	195	.050	.125	1.50	6.004	858	Shear	.033	143	1.574
SK531-11	195	.050	.152	1.50	6.008	875	Shear	.033	144	1.607
SK623-1	75	.050	.120	1.50	5.889	5950	Bond	.033	1010	1.480
SK623-2	75	.050	.120	1.50	5.944	6380	Bond	.033	1073	2.230
SK623-3	75	.050	.120	1.50	5.940	6450	Bond	.033	1086	2.361
SK623-4	75	.050	.120	1.50	5.824	6310	Bond	.033	1083	2.193
SK623-5	75	.150	.120	1.50	5.965	6100	Bond	.033	1023	2.212
SK623-6	75	.050	.120	1.50	5.900	5875	Bond	.033	996	2.097
SK623-7	-30	.050	.120	0.73	2.854	5650	Bond	.069	1980	1.864
SK623-8	-30	.050	.120	0.73	2.815	5400	Bond	.069	1918	1.683
SK623-9	-30	.050	.120	0.73	2.920	5575	Bond	.069	1909	1.750
SK623-10	-30	.050	.120	0.73	2.884	5700	Bond	.069	1976	1.916
SK623-11	-30	.050	.120	0.73	2.784	5600	Bond	.069	2012	1.916
SK623-12	-30	.050	.120	0.73	2.802	5390	Bond	.069	1924	1.917

TABLE K4. SHEAR TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA						TEST CALCULATION DATA			
	TEST TEMP (°F)	LOAD RATE (IN/MIN)	THICKNESS (IN)	GAGE LENGTH (IN)	SHEAR AREA (IN ²)	RUPTURE LOAD (LBS)	FAILURE MODE	STRAIN RATE (IN/IN/MIN)	RUPTURE STRESS (LBS/IN ²)	RUPTURE STRAIN (IN/IN)
SK623-14	195	.050	.120	1.50	2.788	127	Bond	.033	62	3.000
SK623-15	195	.050	.120	1.50	2.717	157	Bond	.033	58	3.250
SK623-16	195	.050	.120	1.50	2.800	163	Bond	.033	58	3.917
SK623-17	195	.050	.120	1.50	2.821	180	Bond	.033	64	3.666
SK623-18	195	.050	.120	1.50	2.802	176	Bond	.033	63	3.001
SK627-1	76	.050	.120	1.50	6.170	7900	Bond	.033	1280	5.030
SK627-2	76	.050	.120	1.50	6.213	8850	Bond	.033	1425	6.083
SK627-3	76	.050	.120	1.50	6.185	8300	Bond	.033	1342	5.633
SK627-4	76	.050	.120	1.50	6.167	8450	Bond	.033	1370	5.917
SK627-5	76	.050	.120	1.50	6.128	7250	Bond	.033	1183	5.500
SK627-6	76	.050	.120	1.50	6.198	7600	Bond	.033	1226	5.667
SK531U-1	85	.050	.120	1.50	5.969	750	Bond	.033	126	0.498
SK531U-2	85	.050	.120	1.50	6.005	810	Bond	.033	135	0.576
SK531U-3	85	.050	.120	1.50	6.044	1250	Bond	.033	207	0.879
SK531U-4	85	.050	.120	1.50	6.018	660	Bond	.033	110	0.383
SK531U-5	85	.050	.120	1.50	6.003	810	Bond	.033	135	0.482
SHU531-1	75	.050	.120	1.30	6.079	1555	Shear	.033	256	3.493
SHU531-2	75	.050	.120	1.30	6.088	1600	Shear	.033	263	3.699
SHU531-3	75	.050	.120	1.30	6.061	1380	Shear	.033	228	3.710
SHU531-4	75	.050	.120	1.30	6.036	1420	Shear	.033	235	3.856
SHU531-5	75	.050	.120	1.30	6.081	1360	Shear	.033	224	3.939
SHU531-6	75	.050	.120	1.30	6.036	1520	Shear	.033	252	3.716

TABLE K5. SHEAR TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA							TEST CALCULATION DATA			
	TEST TEMP (°F)	LOAD RATE (IN/MIN)	THICKNESS (IN)	GAGE LENGTH (IN)	SHEAR AREA (IN ²)	RUPTURE LOAD (LBS)	FAILURE MODE	STRAIN RATE (IN/IN/MIN)	RUPTURE STRESS (LBS/IN ²)	RUPTURE STRAIN (IN/IN)	
SWU531-7	-30	.050	.120	1.50	6.048	1960	Shear	.033	324	2.72	
SWU531-8	-30	.050	.120	1.50	6.070	1825	Shear	.033	301	2.80	
SWU531-9	-30	.050	.120	1.50	6.067	1975	Shear	.033	326	3.04	
SWU531-10	-30	.050	.120	1.50	6.018	1940	Shear	.033	322	2.64	
SWU531-11	-30	.050	.120	1.50	6.058	1950	Shear	.033	322	3.12	
SWU531-12	-30	.050	.120	1.50	6.052	2075	Shear	.033	343	2.88	
SWU531-19	-30	.050	.120	1.50	6.035	1850	Shear	.033	307	2.92	
SWU531-13	195	.050	.120	1.50	6.026	1000	Shear	.033	166	1.32	
SWU531-14	195	.050	.120	1.50	6.043	995	Shear	.033	165	1.56	
SWU531-15	195	.050	.120	1.50	6.040	960	Shear	.033	159	1.48	
SWU531-16	195	.050	.120	1.50	6.042	1150	Shear	.033	190	1.56	
SWU531-17	195	.050	.120	1.50	6.055	975	Shear	.033	161	1.44	
SWU531-18	195	.050	.120	1.50	5.964	1090	Shear	.033	183	1.32	

TABLE K6. SHEAR TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA						TEST CALCULATION DATA			
	TEST TEMP (°F)	LOAD RATE (IN/MIN)	THICKNESS (IN)	GAGE LENGTH (IN)	SHEAR AREA (IN ²)	RUPTURE LOAD (LBS)	FAILURE MODE	STRAIN RATE (IN/IN/MIN)	RUPTURE STRESS (LBS/IN ²)	RUPTURE STRAIN (IN/IN)
SHU537-2	75	.001	.125	7.35	34.80	19.3	Shear	.0001	515	1.628
SHU537-3	75	.001	.125	7.35	34.80	17.5	Shear	.0001	466	1.579
SHU537-4	75	.001	.125	7.35	34.80	20.3	Shear	.0001	541	1.486
SHU537-5	75	.001	.125	7.35	34.80	17.2	Shear	.0001	460	1.486
PPR539-1	76	.001	.125	7.35	34.80	62	Bond	.0001	793	3.208
PPR539-2	76	.001	.125	7.35	34.80	55	Bond	.0001	707	1.679
PPR539-3	76	.001	.125	7.35	34.80	67	Bond	.0001	858	2.974
PPR539-4	76	.001	.125	7.35	34.80	61	Bond	.0001	782	2.249
PPR539-5	76	.001	.125	7.35	34.80	62	Bond	.0001	779	2.254
SK535-1	75	.001	.120	7.35	34.80	11.5	Shear	.0001	266	1.453
SK535-2	75	.001	.120	7.35	34.80	10.4	Shear	.0001	249	1.461
SK535-3	75	.001	.120	7.35	34.80	12.2	Shear	.0001	288	2.091
SK535-4	75	.001	.120	7.35	34.80	11.6	Shear	.0001	275	2.090
SK535-5	75	.001	.120	7.35	34.80	12.2	Shear	.0001	288	1.960

APPENDIX L
HIGH STRAIN RATE TENSILE
TEST DATA
(SECTION VIII, Part 1)

The following test data are presented for use in conjunction with materials property data presented in the following tables of Section VIII (Part 1).

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Table 21 (Part 1, Page 286)	
Test Stress-Strain Curves - Figures L1 through L16	290 - 295
Specimen Photographs - Figures L17 through L32.	296 - 311
Computer Data Runs - Figures L33 through L48	312 - 327
Test Measurement Data - Tables L1 through L4	379 - 382
Table 22 (Part 1, Page 287)	
Test Stress-Strain Curves - Figures L49 through L63	328 - 342
Specimen Photographs - Figures L64 through L78	343 - 357
Computer Data Runs - Figures L79 through L93	358 - 372
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Table 23 (Part 1, Page 296)	
Test Stress-Strain Curves - Figures L94 through L96	373 - 375
Computer Data Runs - Figures L97 through L99.	376 - 378

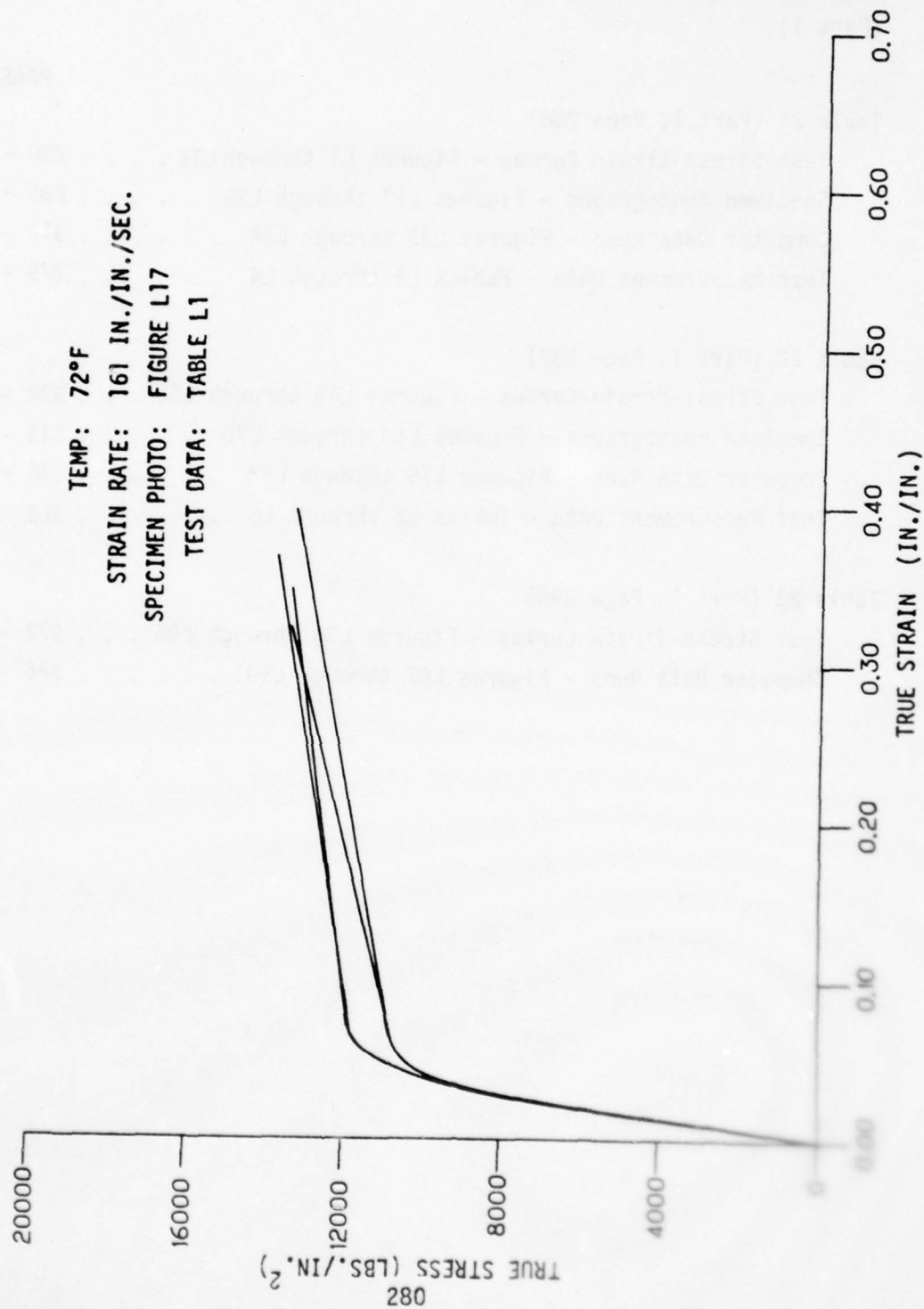


Figure L1. Tensile Test Curves (SWU 523 - 0.10 Polycarbonate).

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TESTING FOR MECHANICAL PROPERTIES OF MONOLITHIC AND LAMINATED P--ETC(U)
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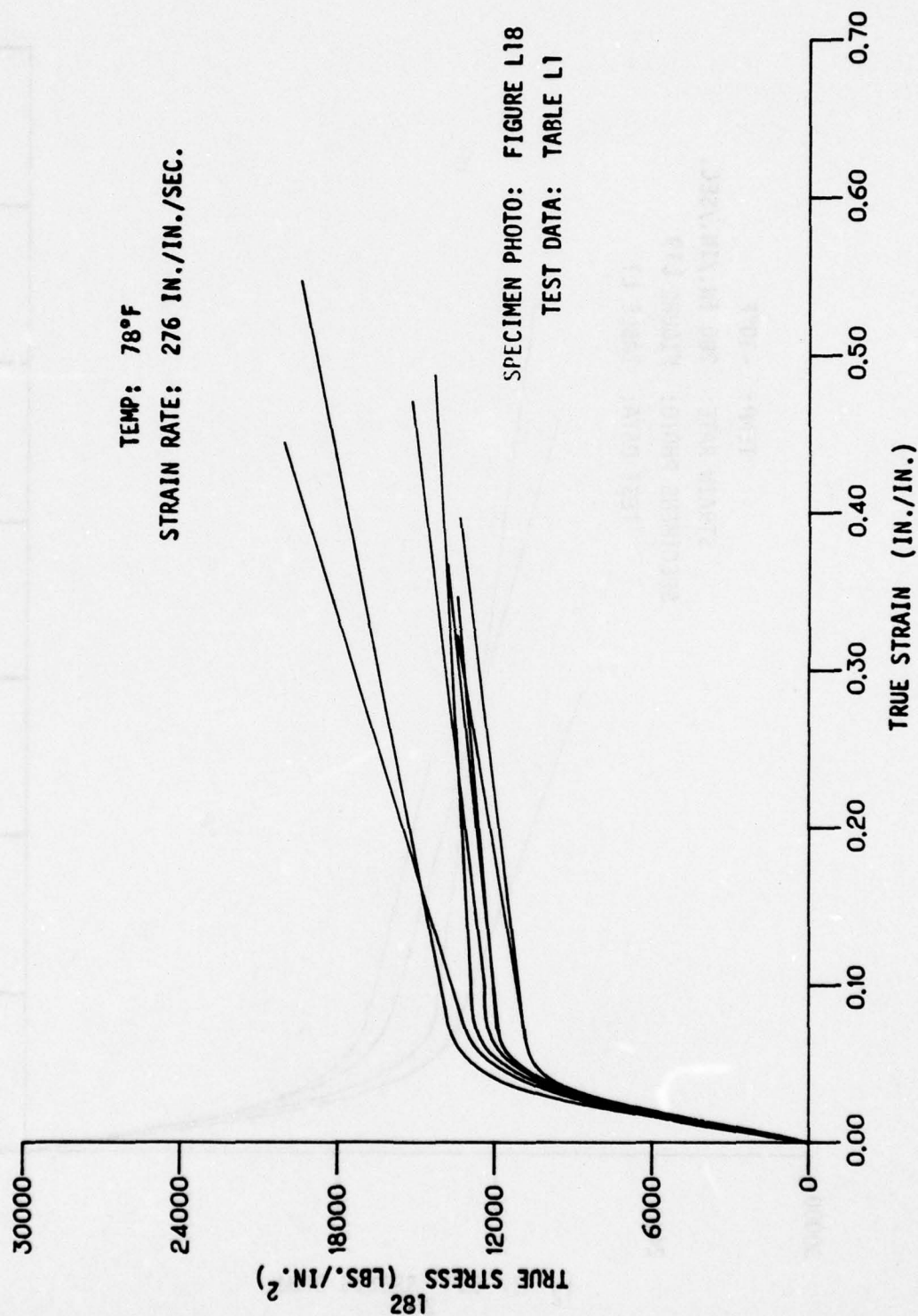


Figure L2. Tensile Test Curves (SWU 523 - 0.10 Polycarbonate).

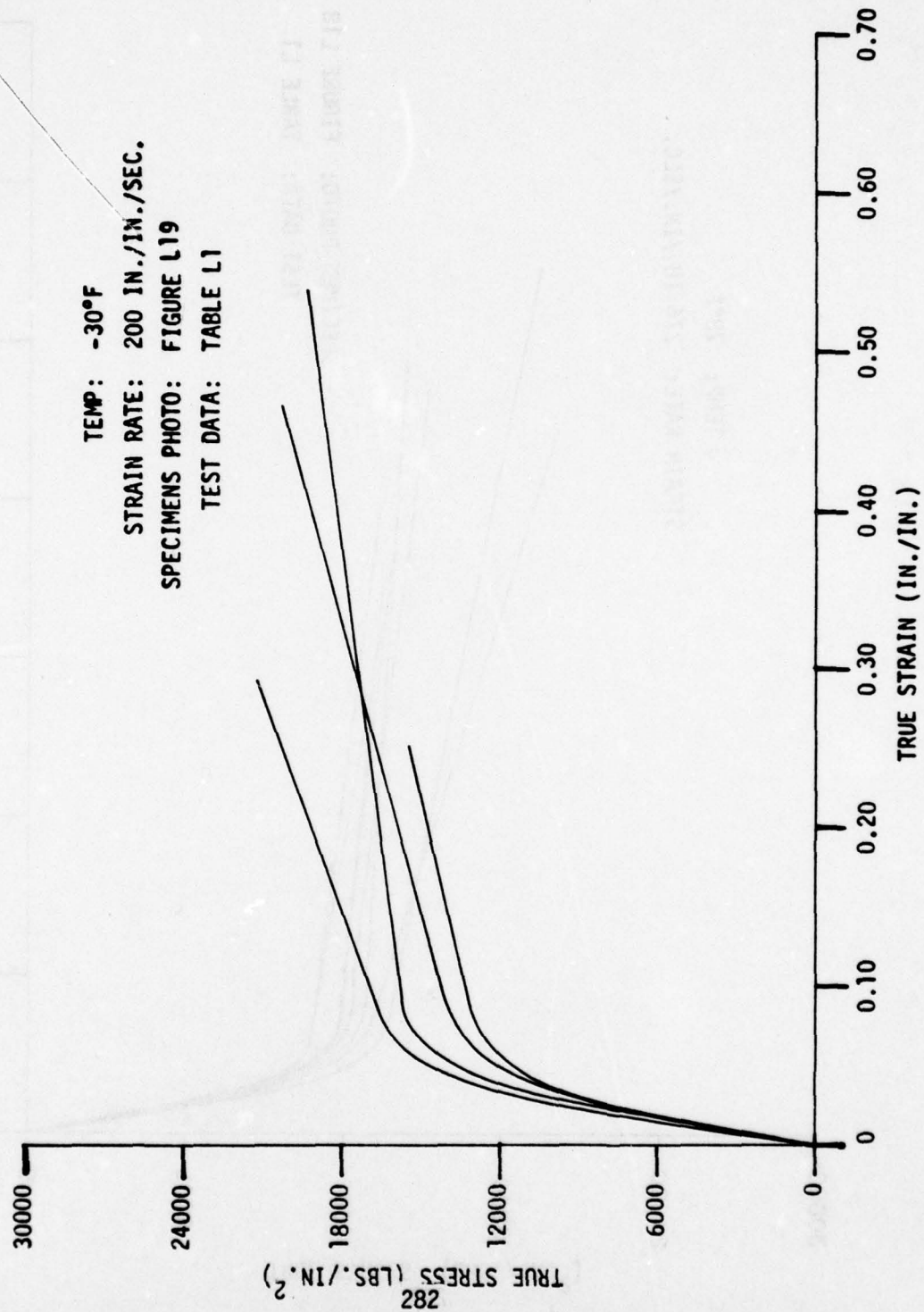


Figure L3. Tensile Test Curves (SWU 523 - 0.10 Polycarbonate).

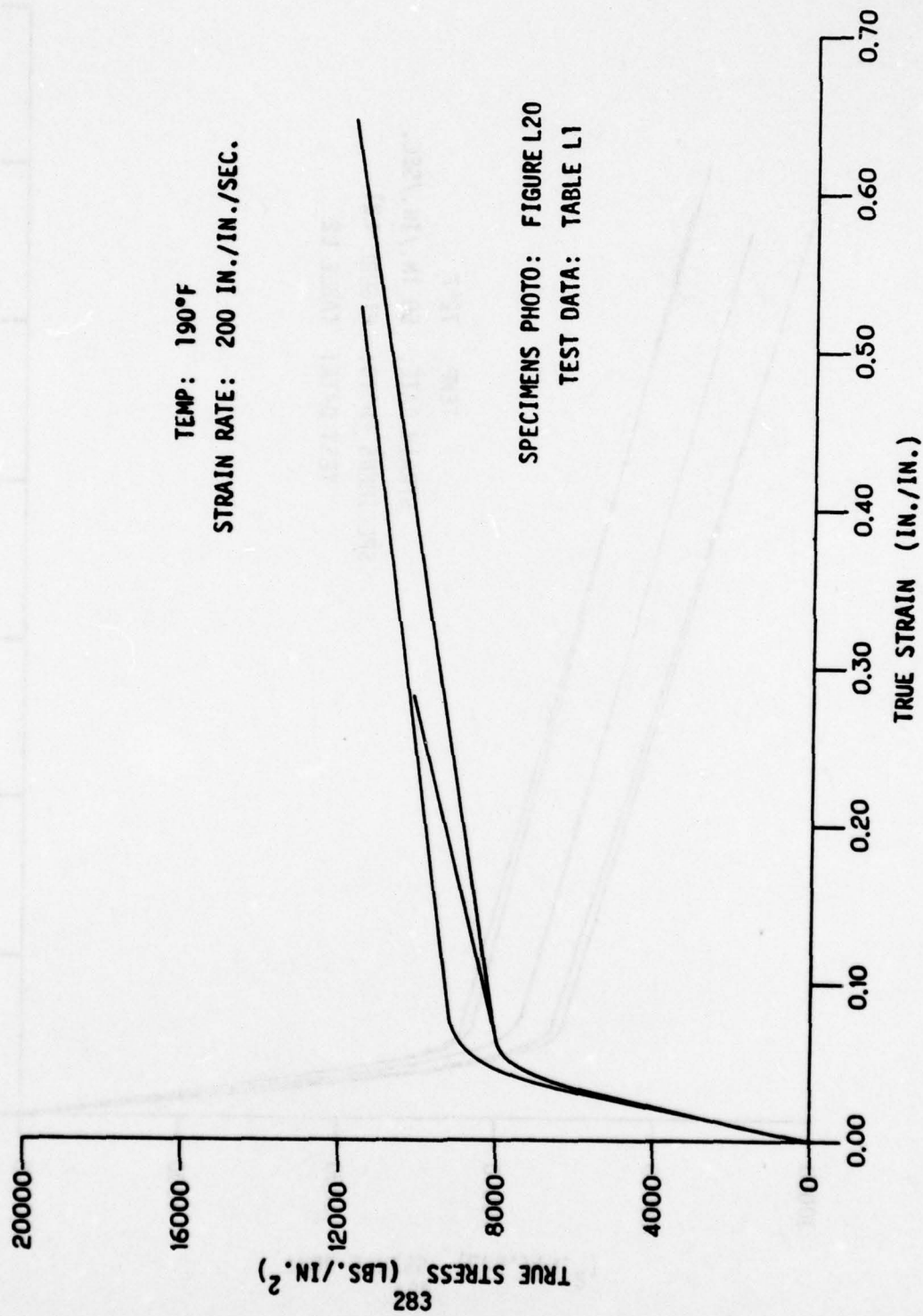


Figure L4. Tensile Test Curves (SMU 523 - 0.10 Polycarbonate).

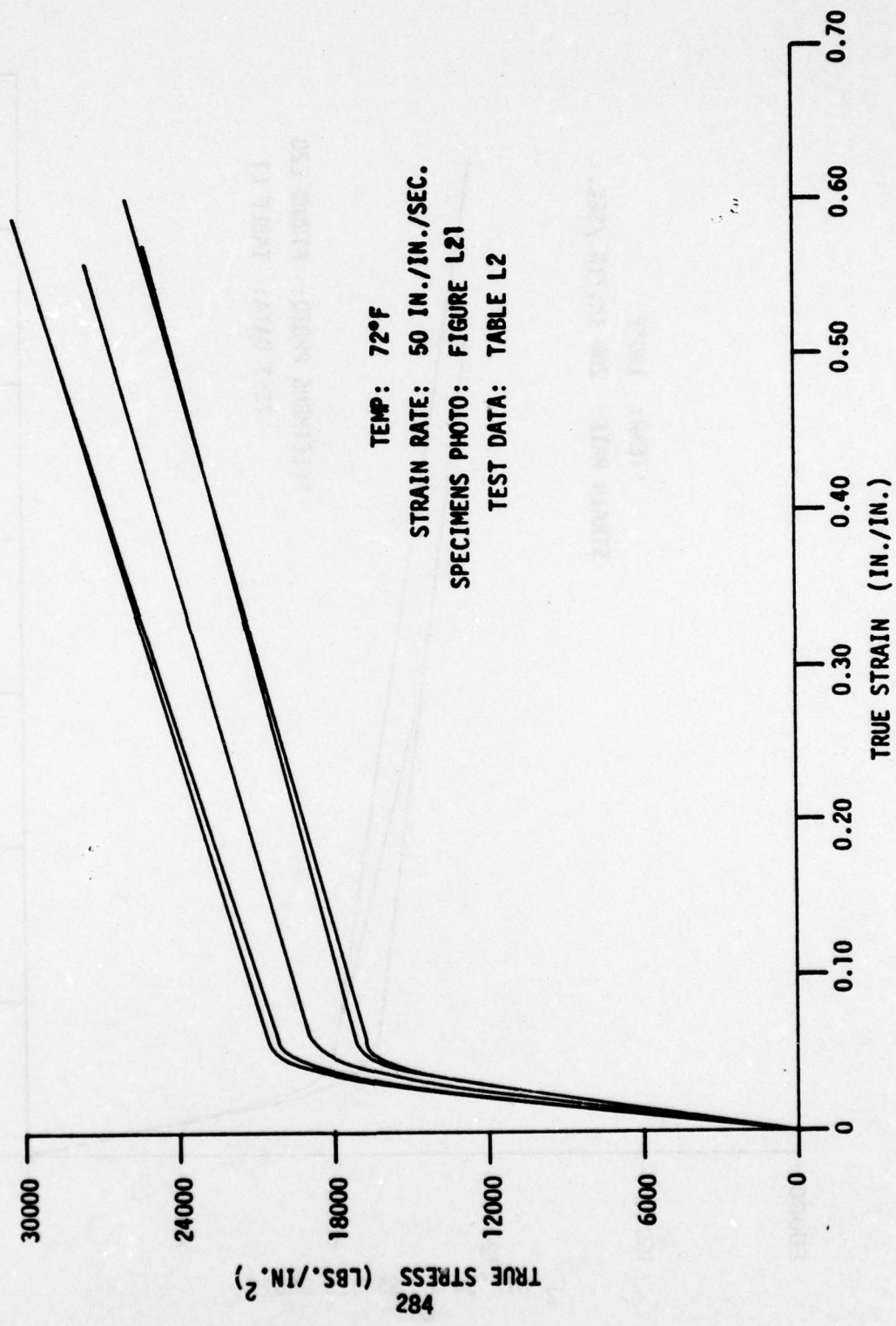


Figure L5. Tensile Test Curves (SWU 569 - 0.20 Polycarbonate).

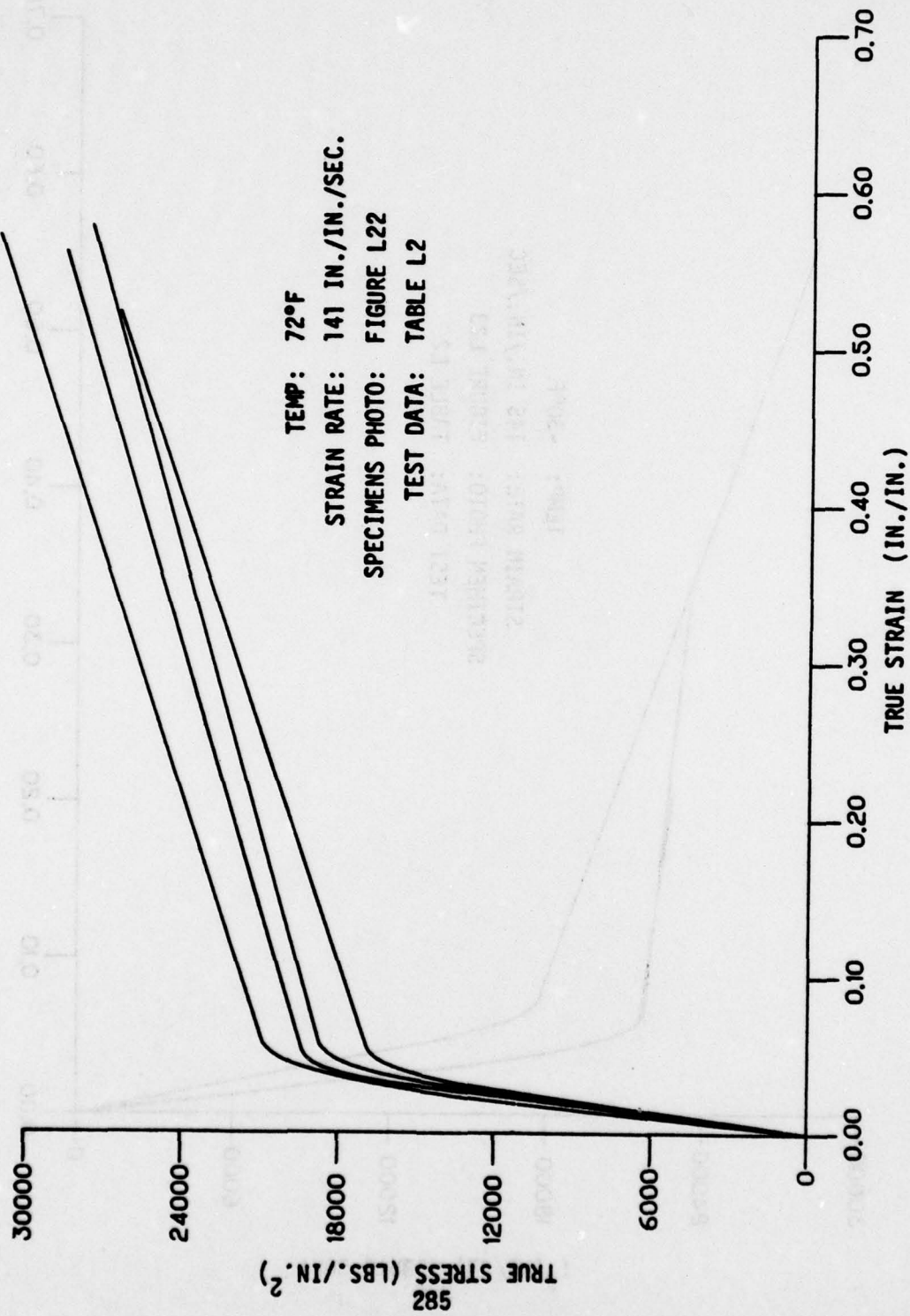


Figure L6. Tensile Test Curves (SWU 569 - 0.20 Polycarbonate).

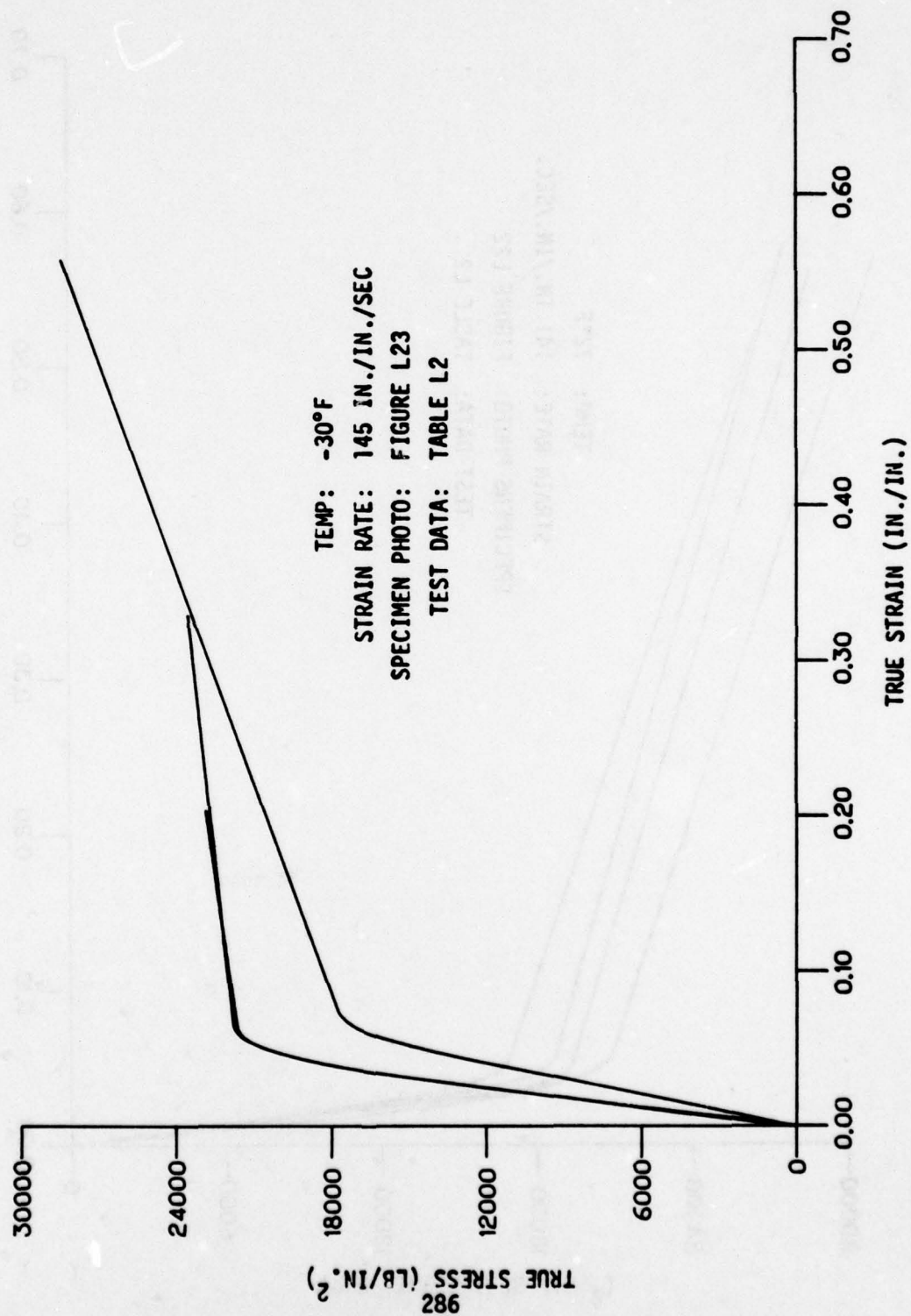


Figure L7. Tensile Test Curves (SWU569 - 0.20 Polycarbonate).

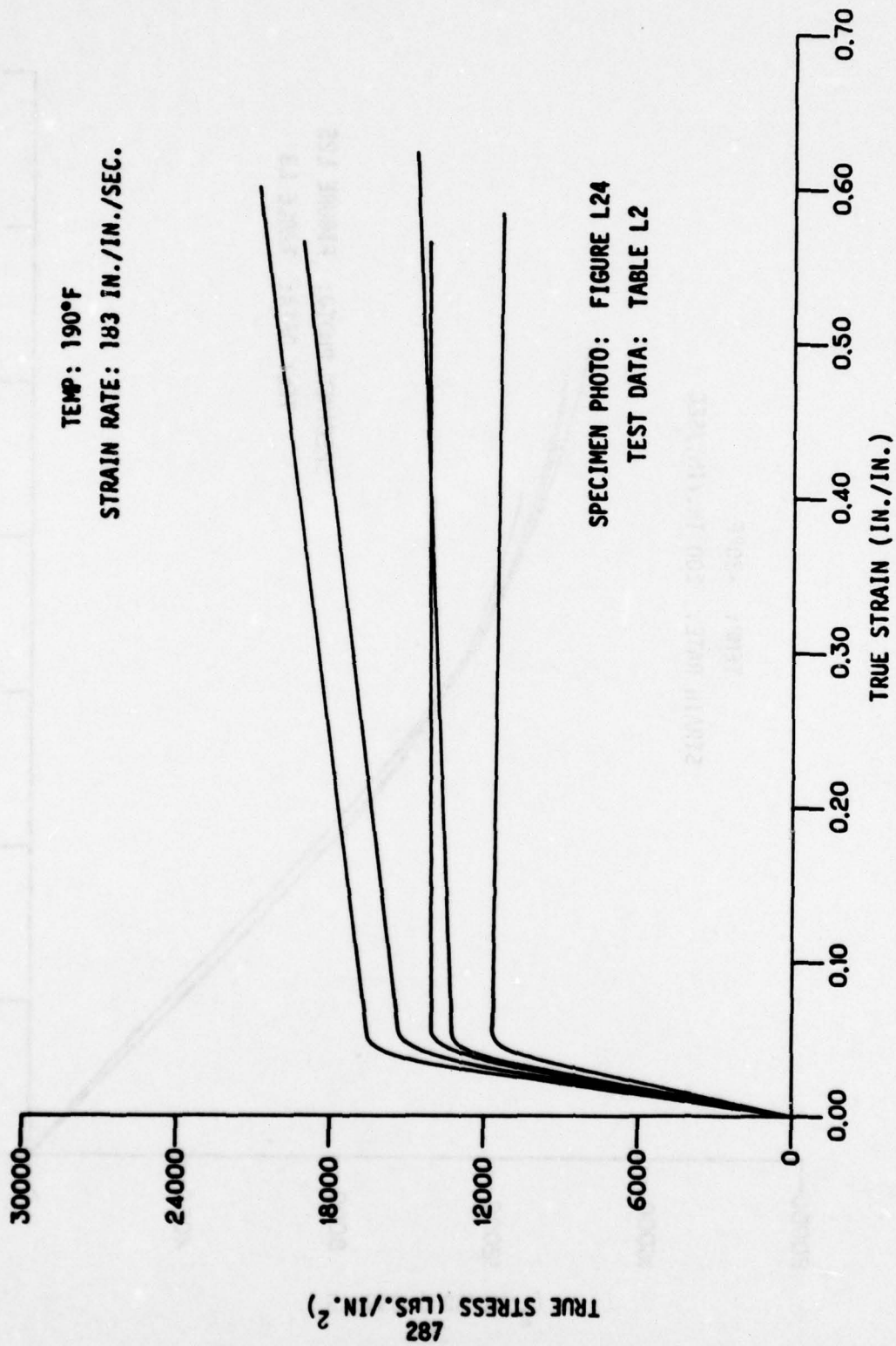


Figure L8 . Tensile Test Curves (SWU569 - 0.20 Polycarbonate).

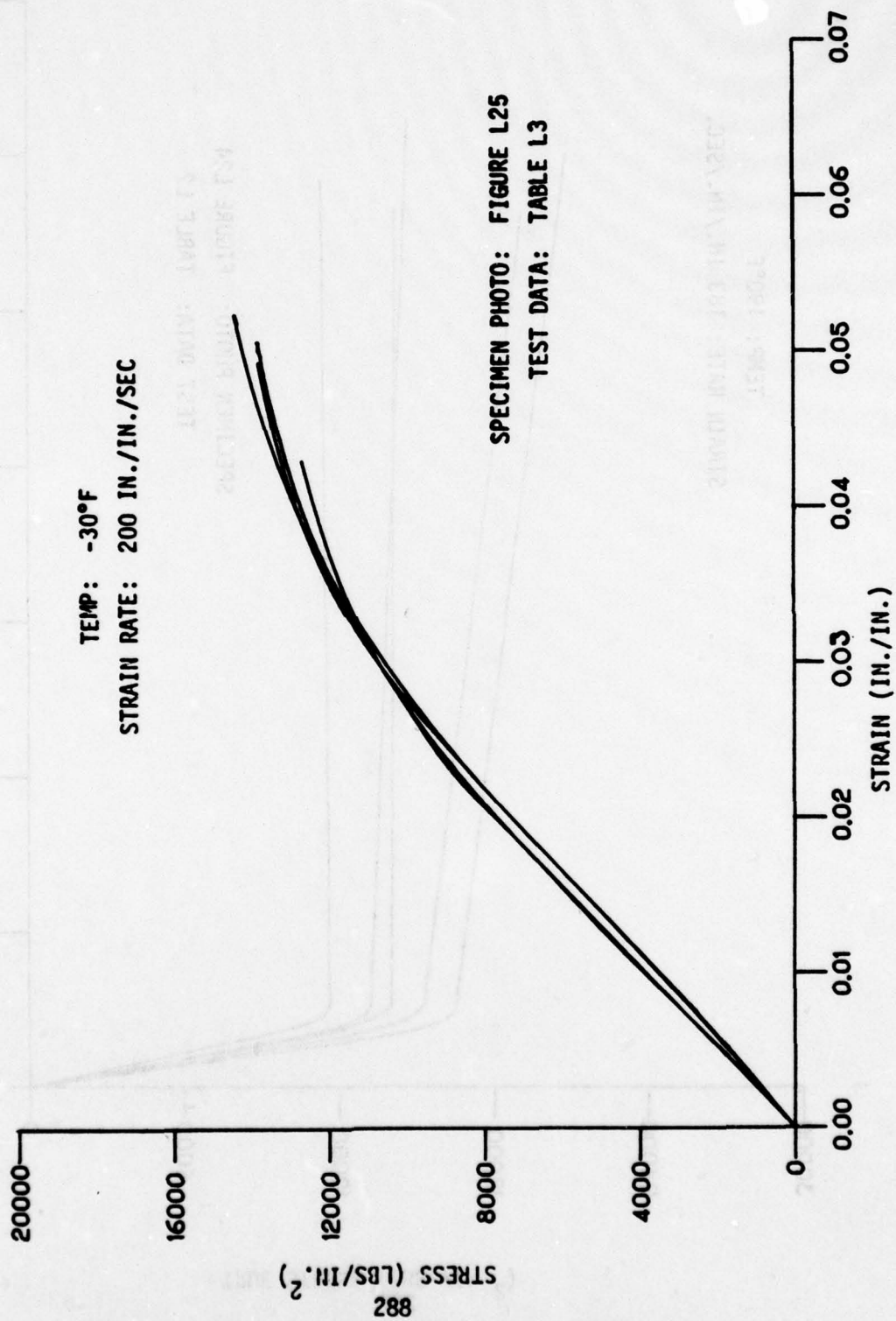


Figure L9. Tensile Test Curves (SHU601 - 0.20 Polycarbonate).

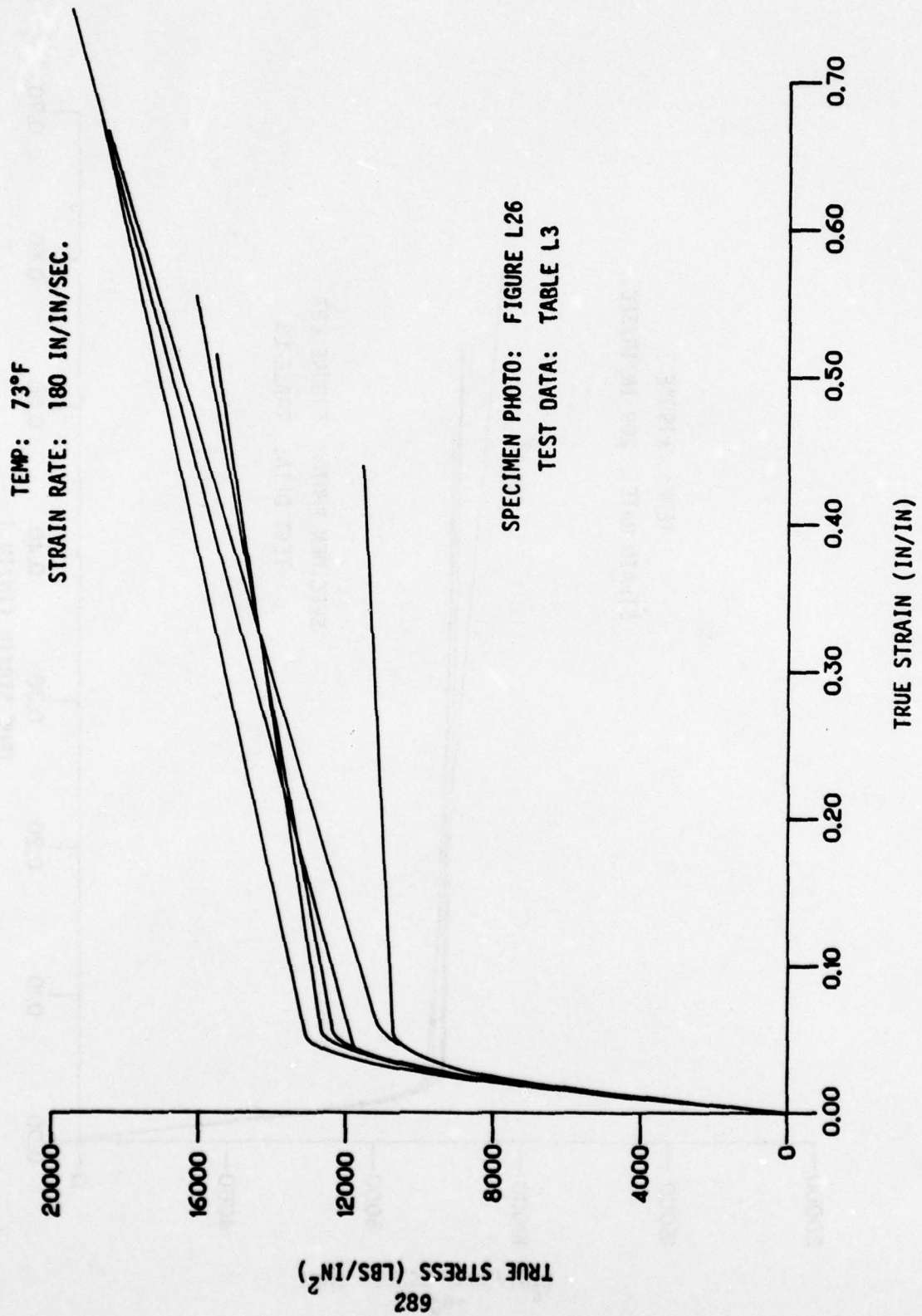
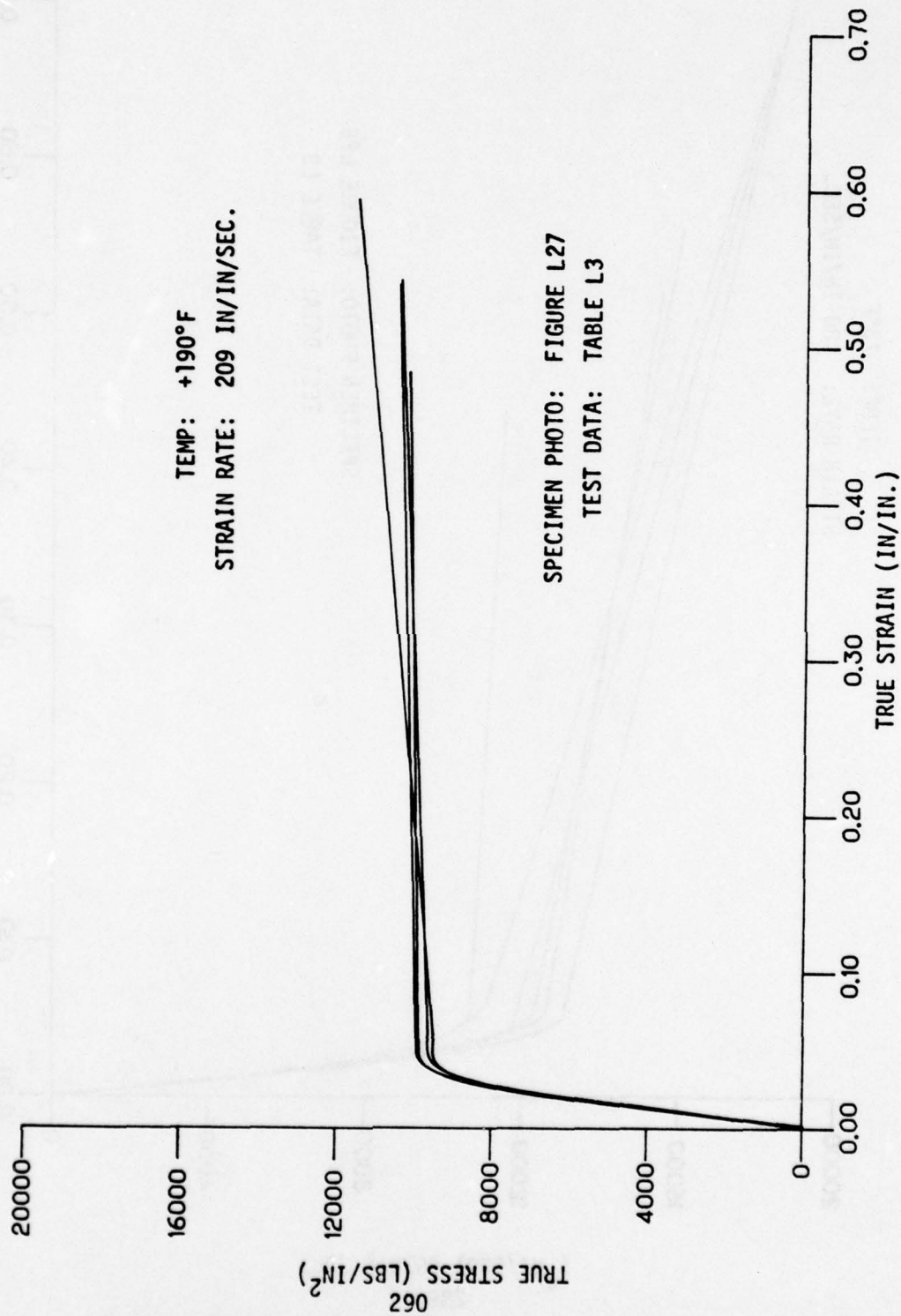


Figure L10. Tensile Test Curve (SMU601 - 0.20 Polycarbonate).



FigureL11. Tensile Test Curves (SWU601-0.20 Polycarbonate).

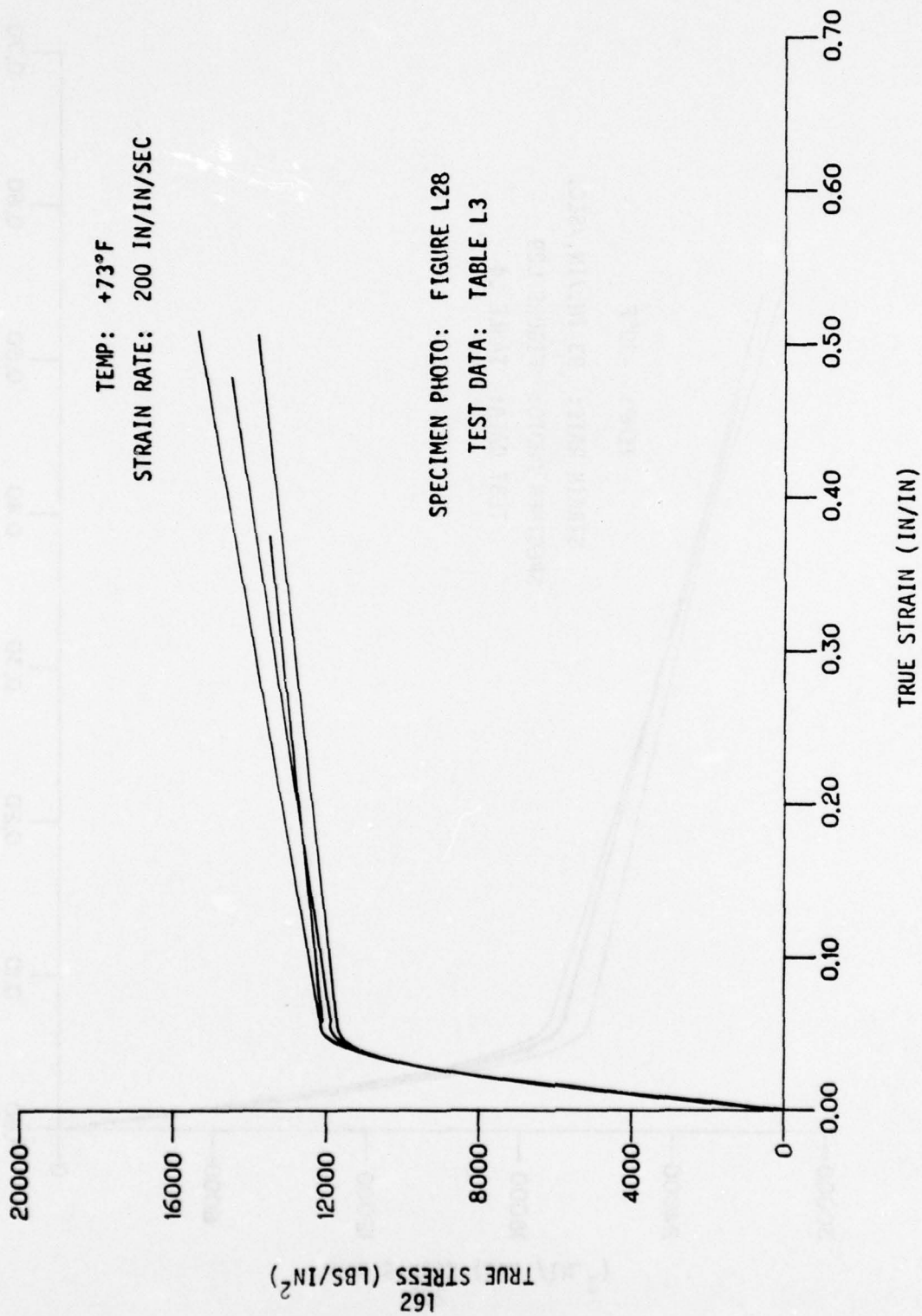


Figure L12. Tensile Test Curves (SWU601 - 0.20 polycarbonate)

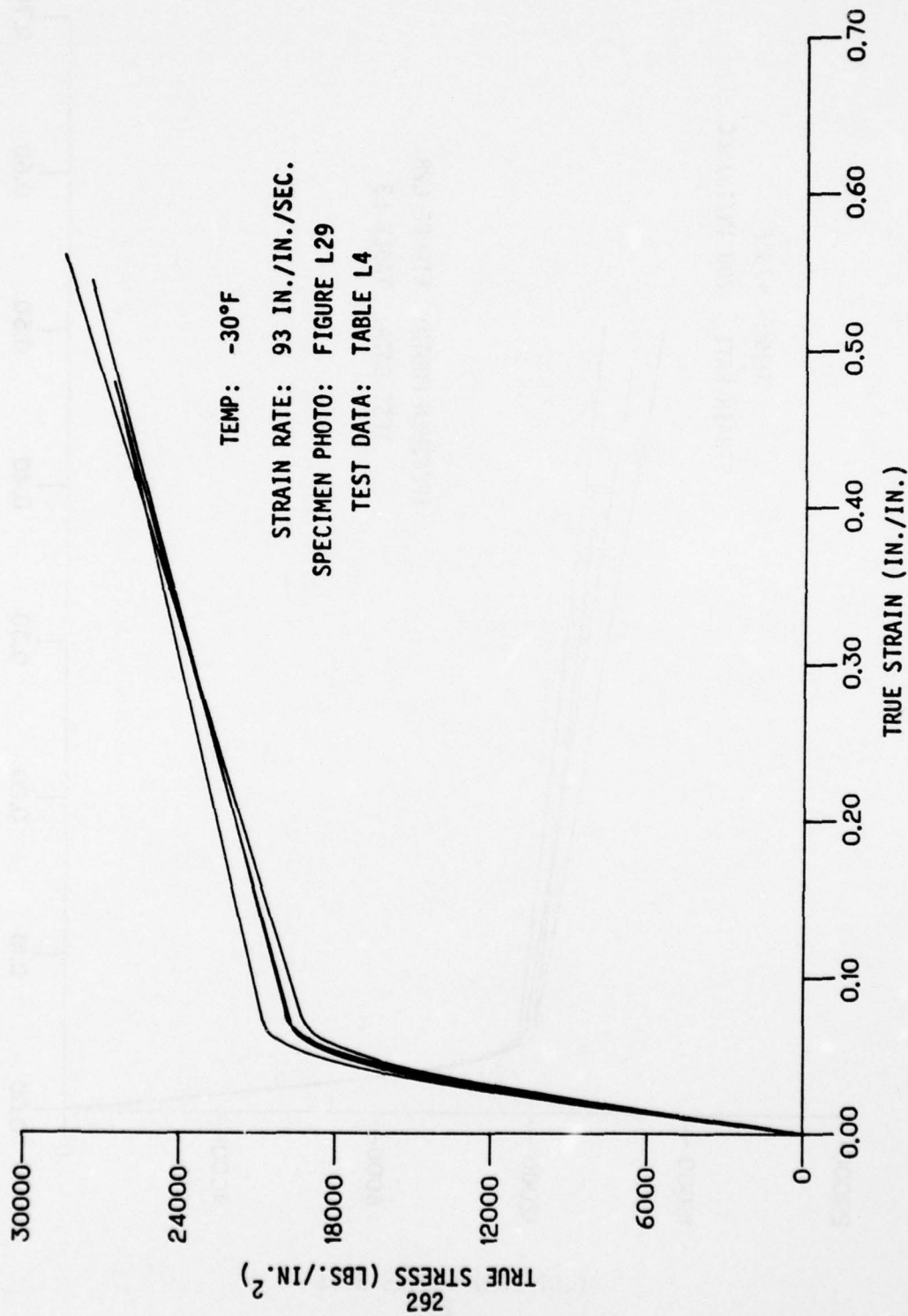


Figure L13. Tensile Test Curves (SWU611 - 0.28 Polycarbonate)

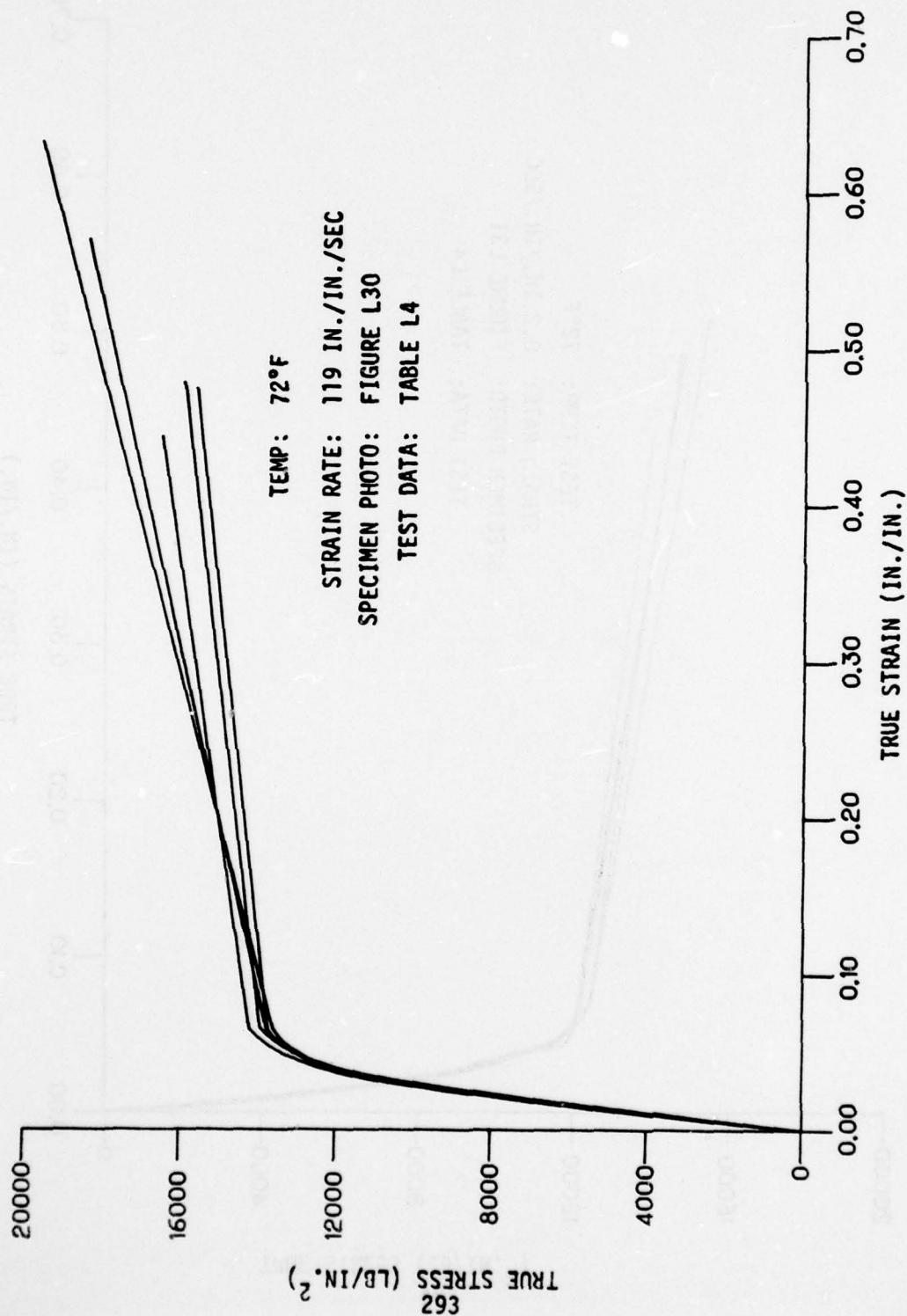


Figure L14 Tensile Test Curves (SWU611 - 0.28 Polycarbonate).

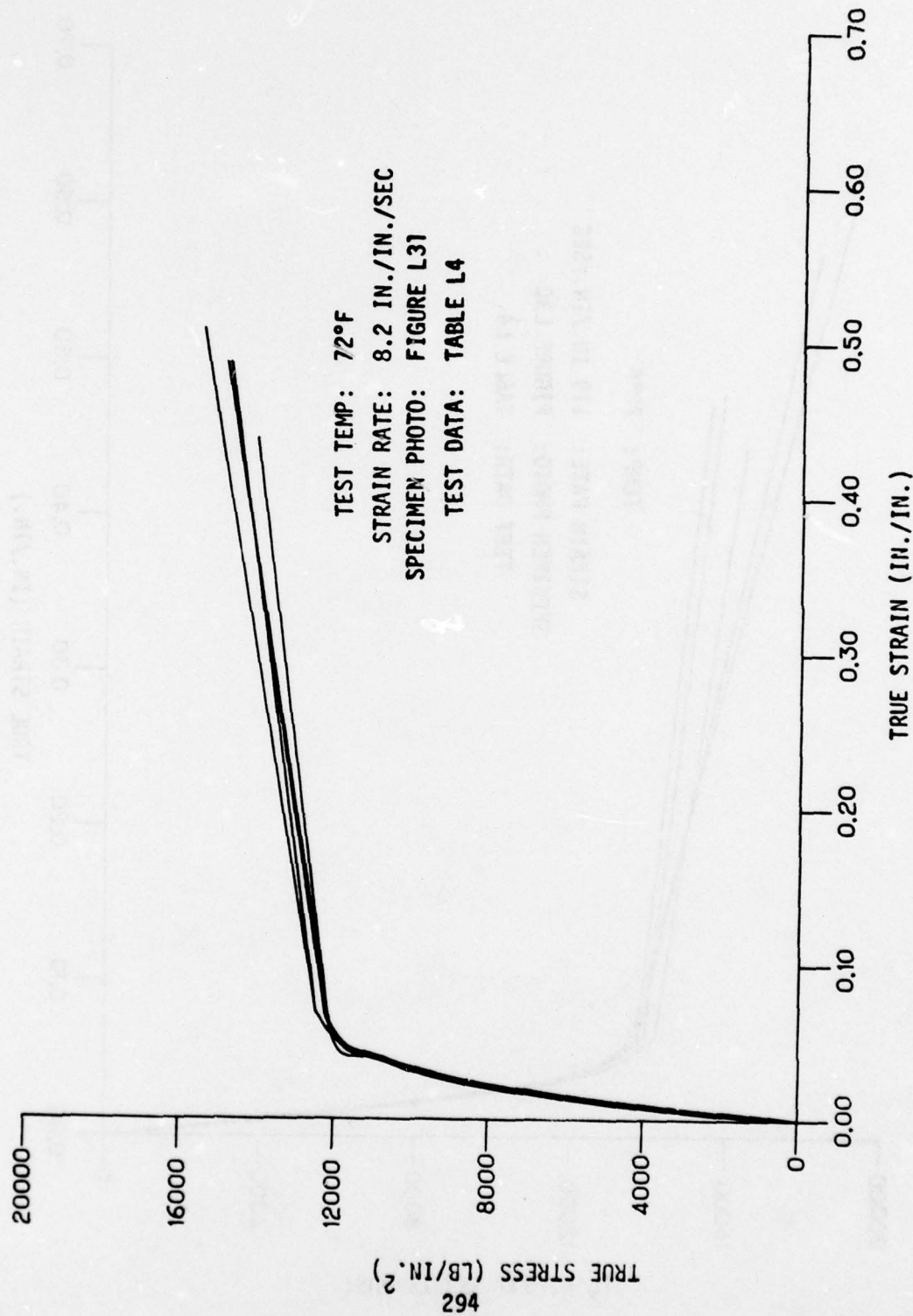


Figure L15. Tensile Test Curves (SIU611 - 0.30 Polycarbonate).

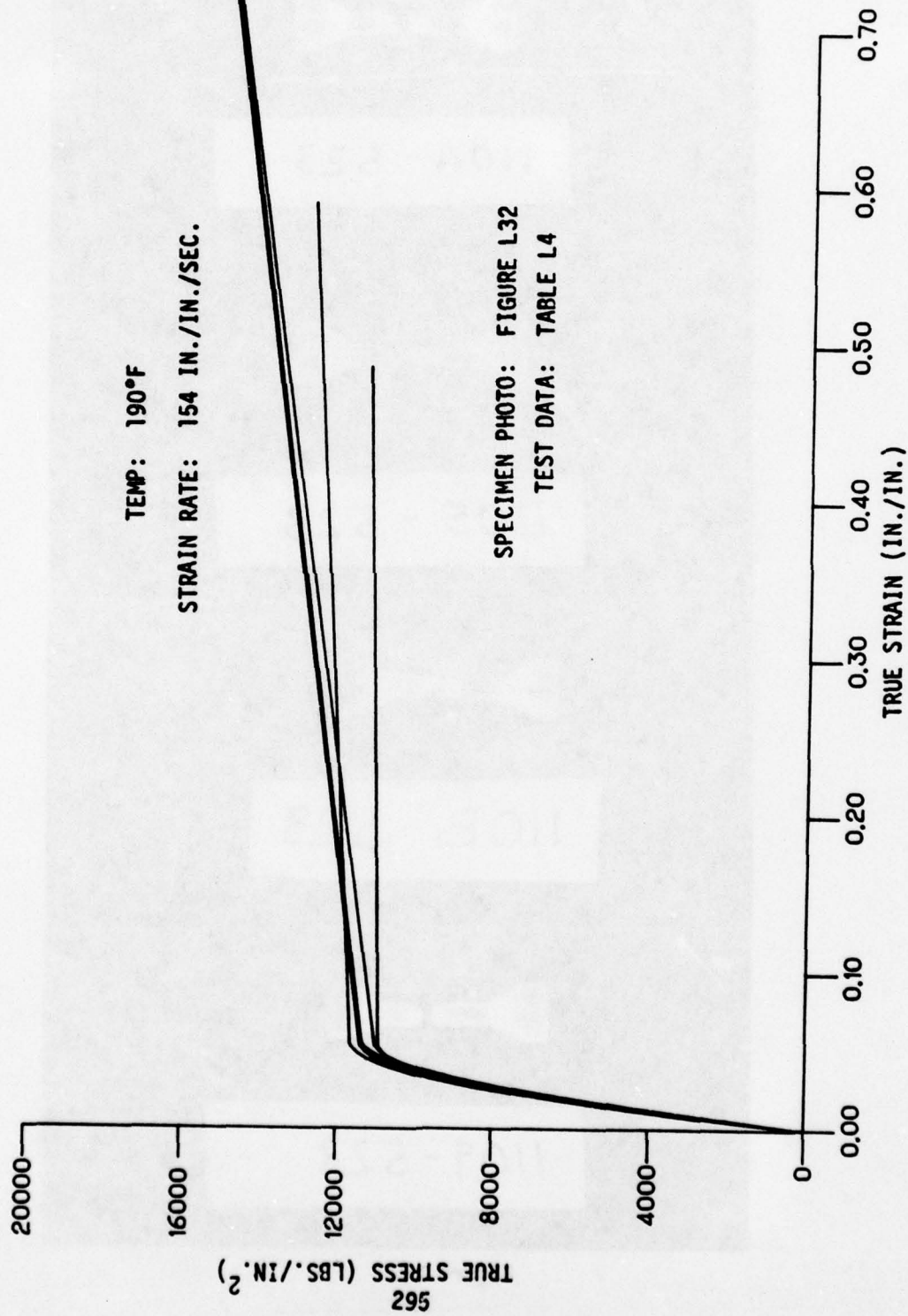


Figure L16. Tensile Test Curves (SWU611 - 0.28 Polycarbonate)

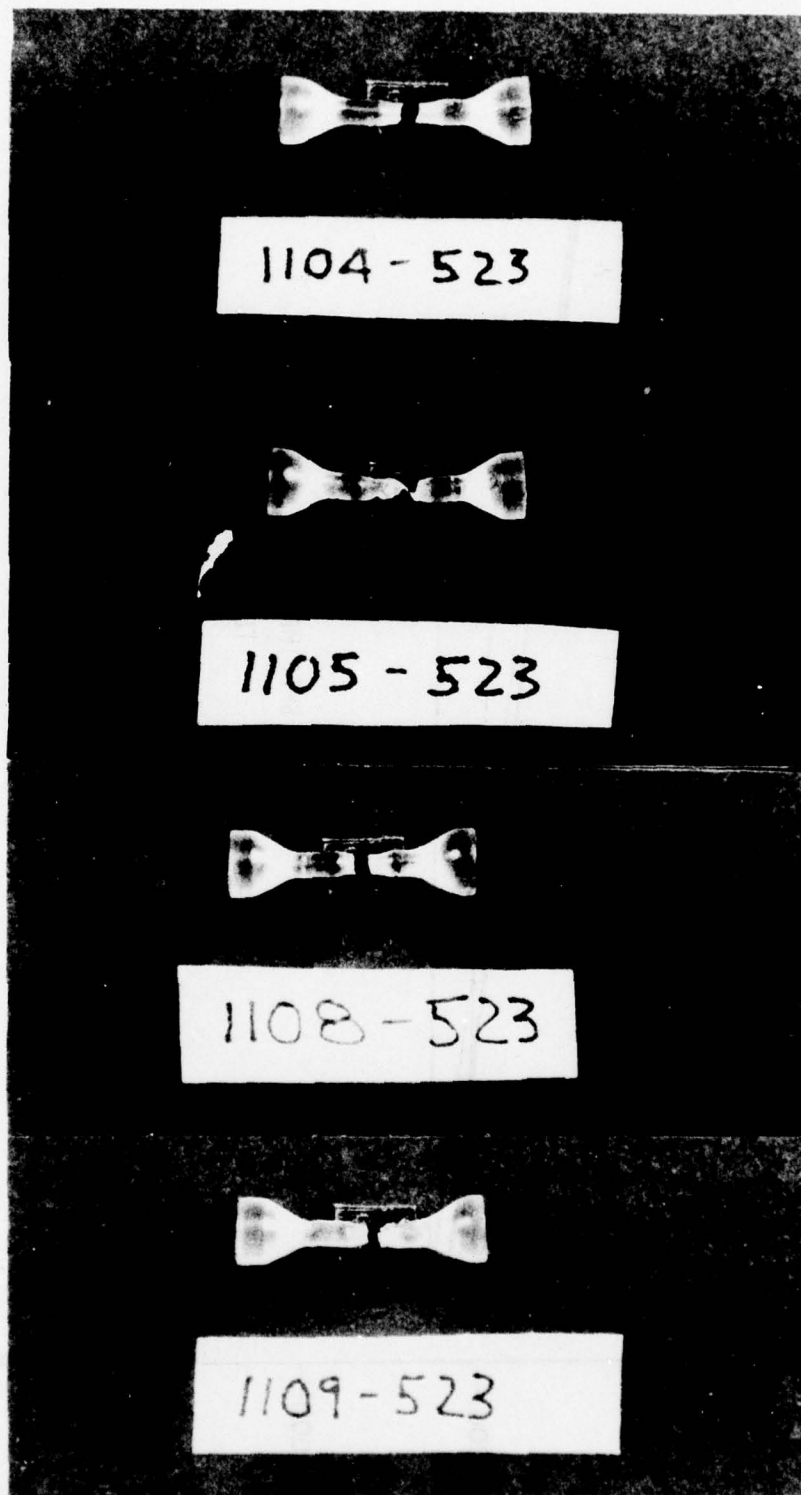
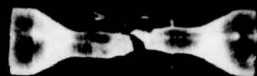


Figure L17
296



1098-523



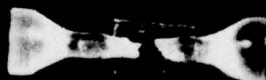
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1100-523



1103-523



1107-523

Figure L18

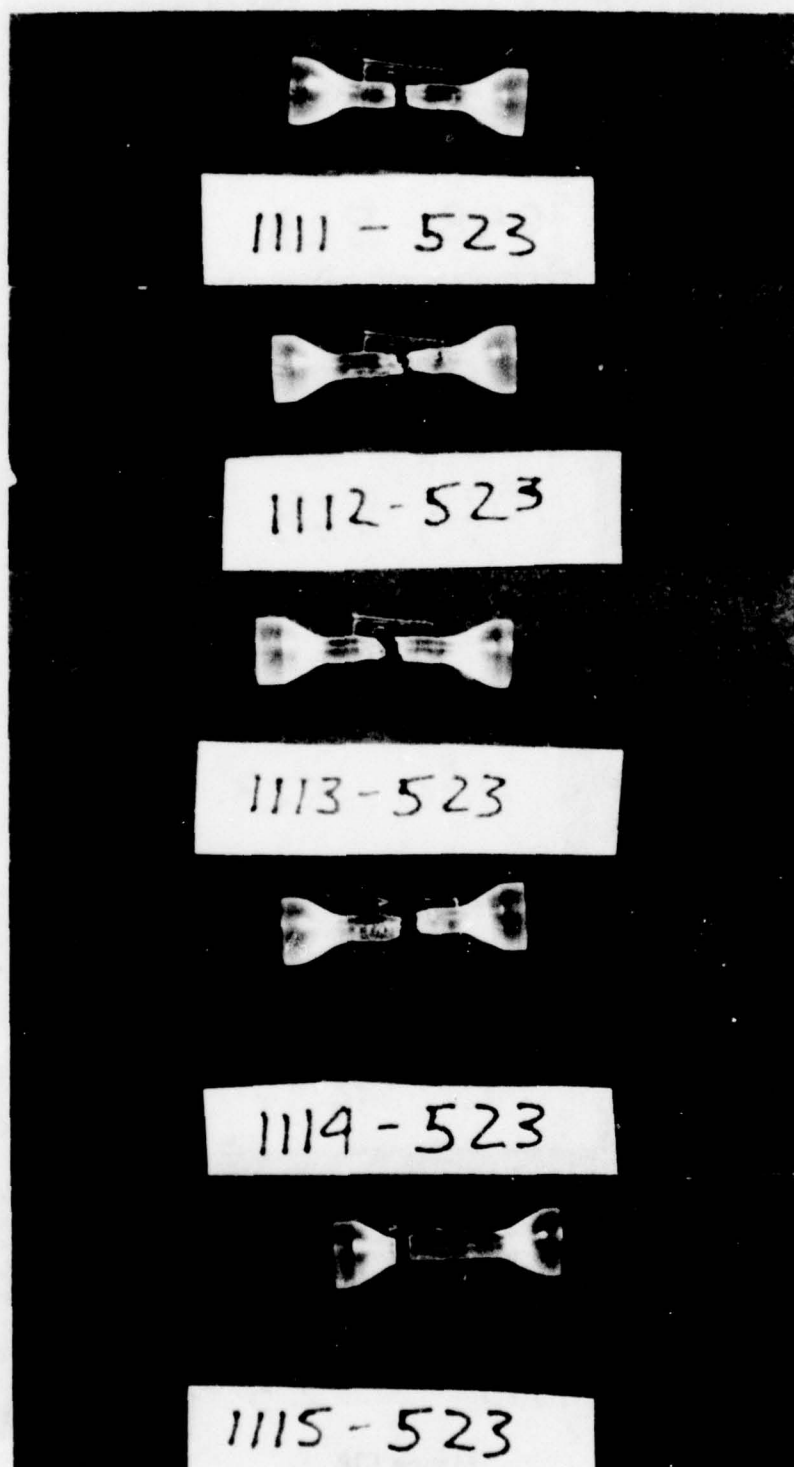


Figure L19

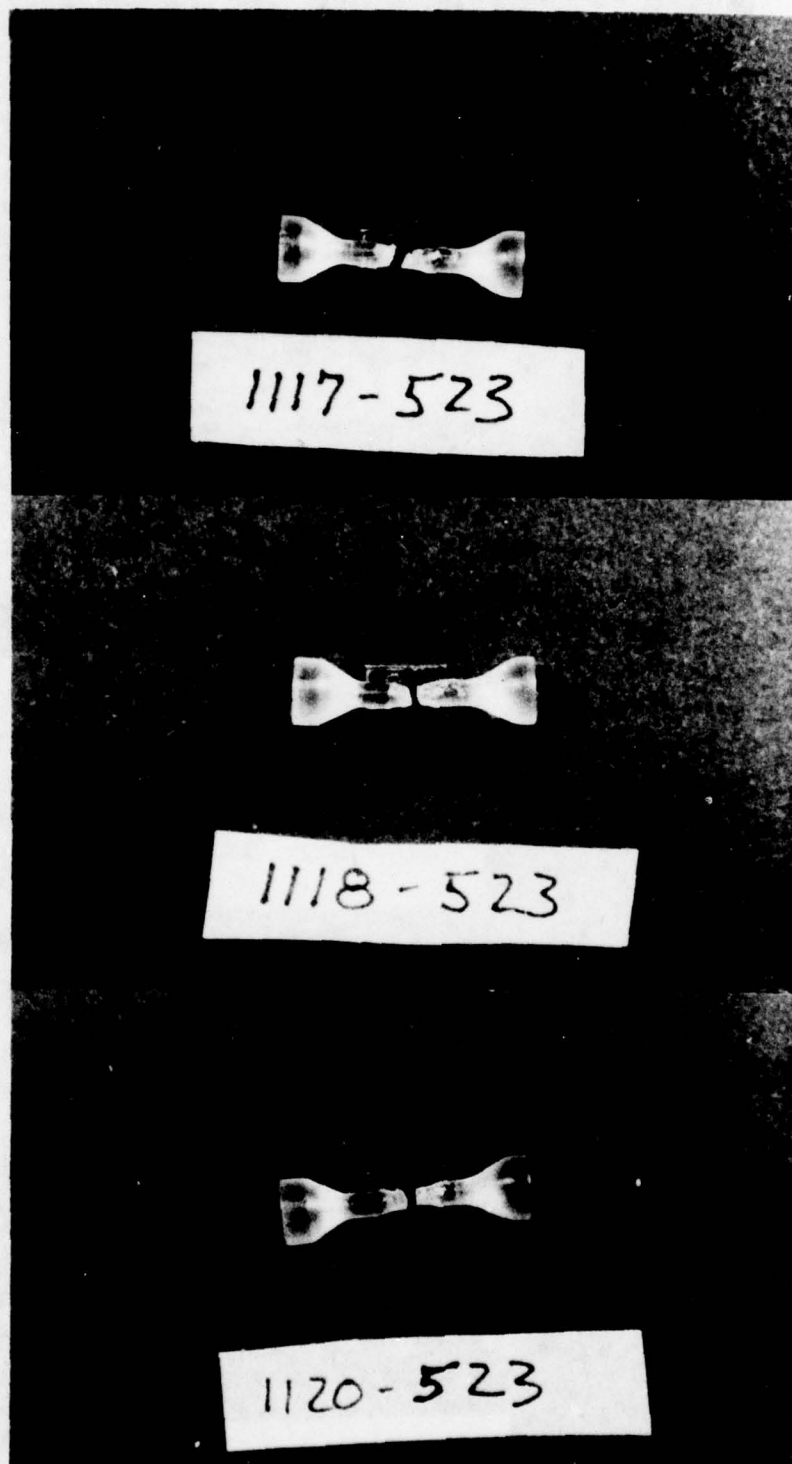


Figure L20.
299

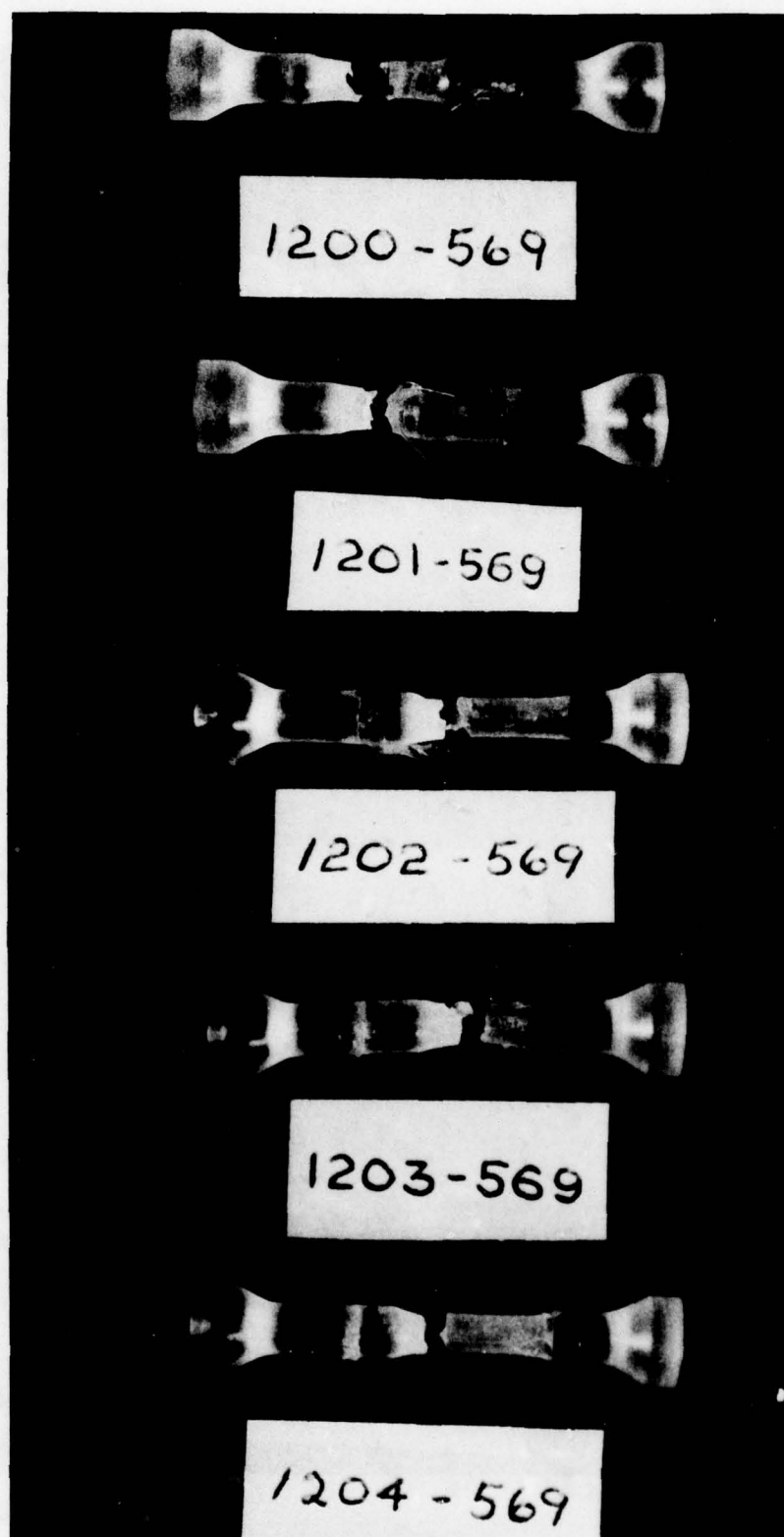


Figure L21.
300

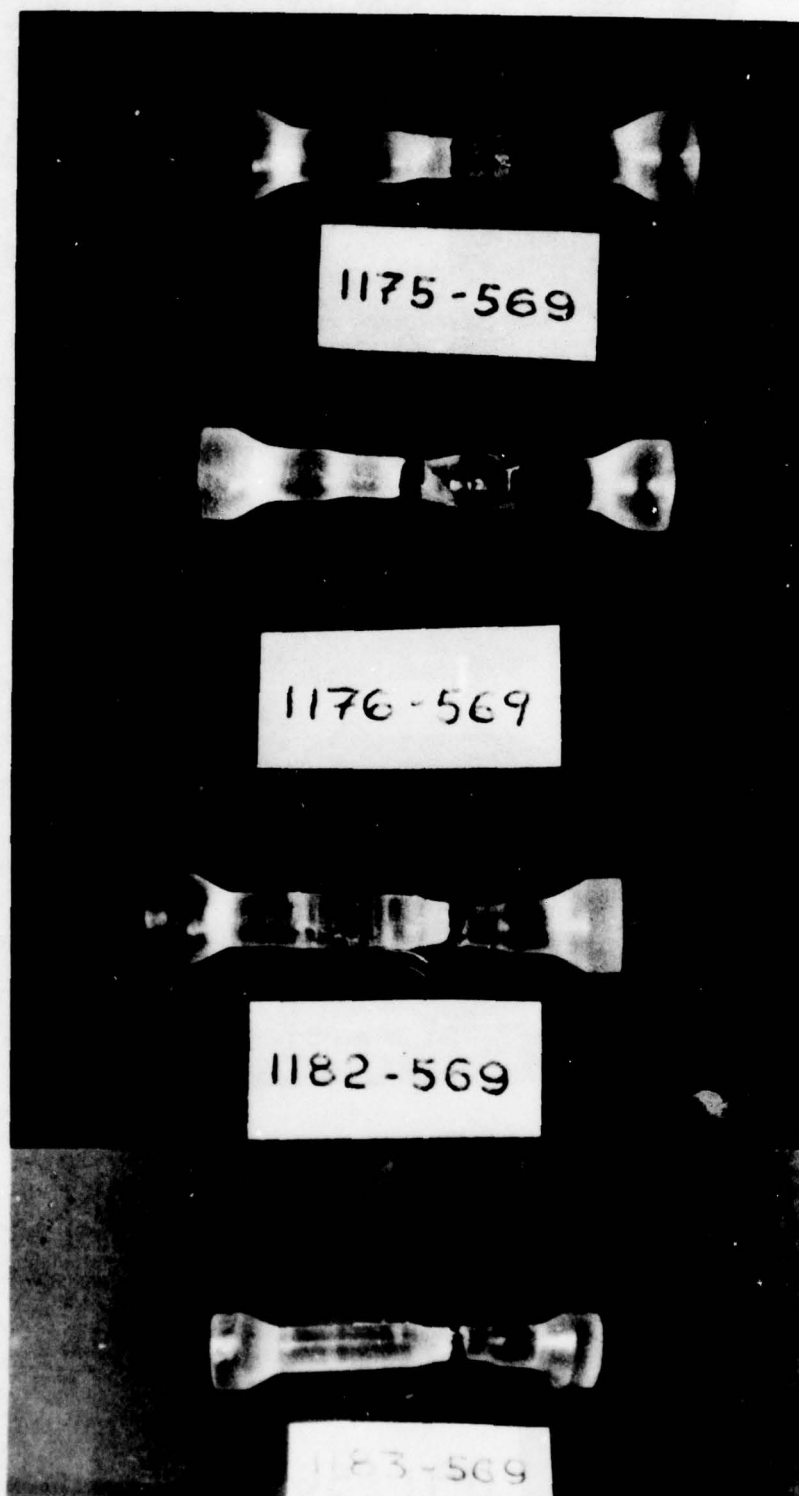
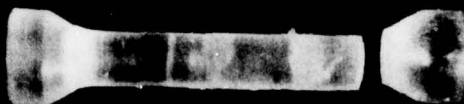


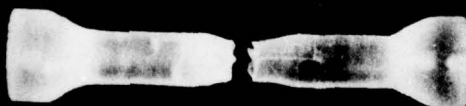
Figure L22.
301



1187-569



1188-569



1189-569



1190-569



1191-569

Figure L23.

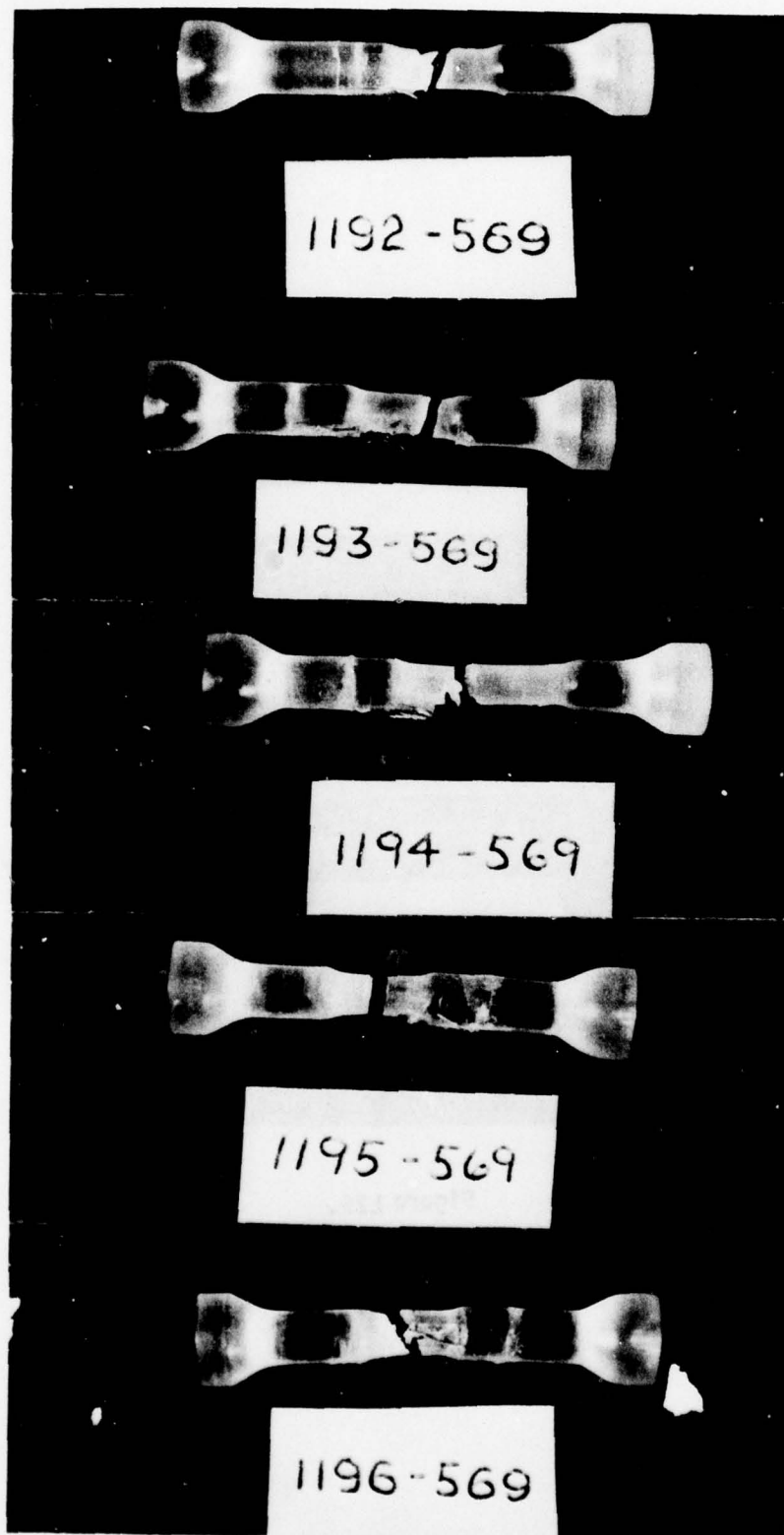


Figure L24.
303

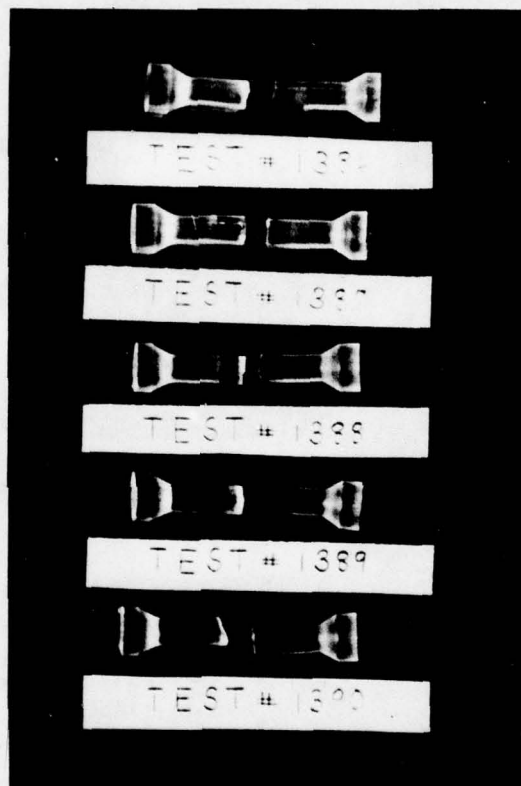


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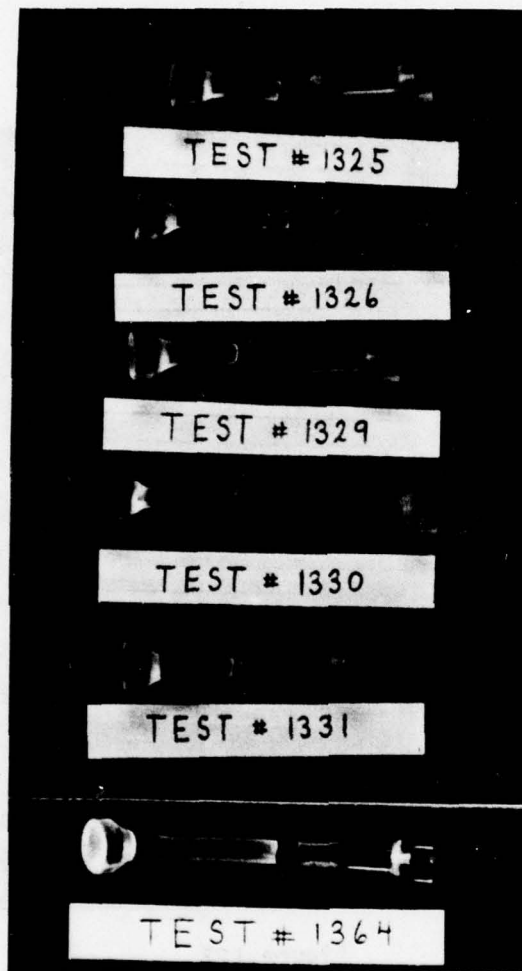


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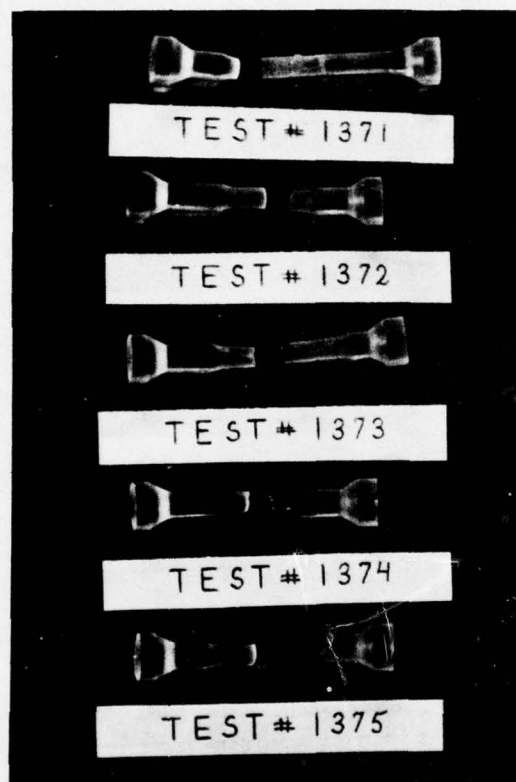


Figure L27.

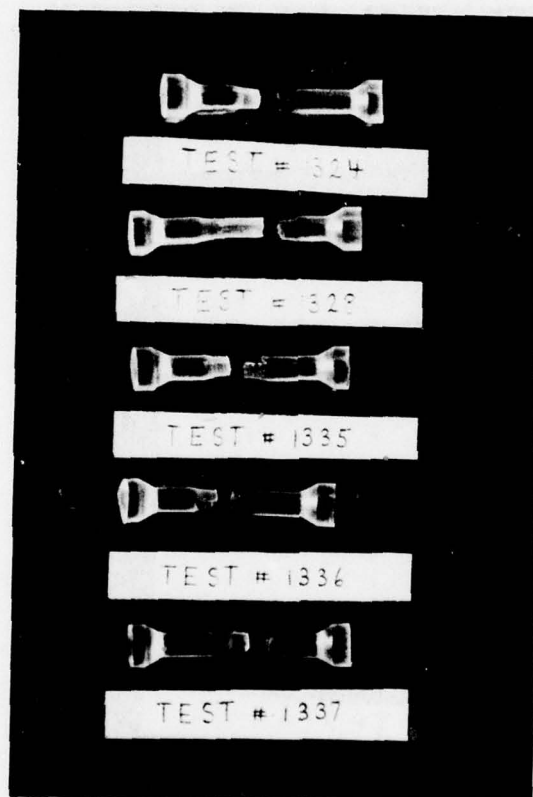


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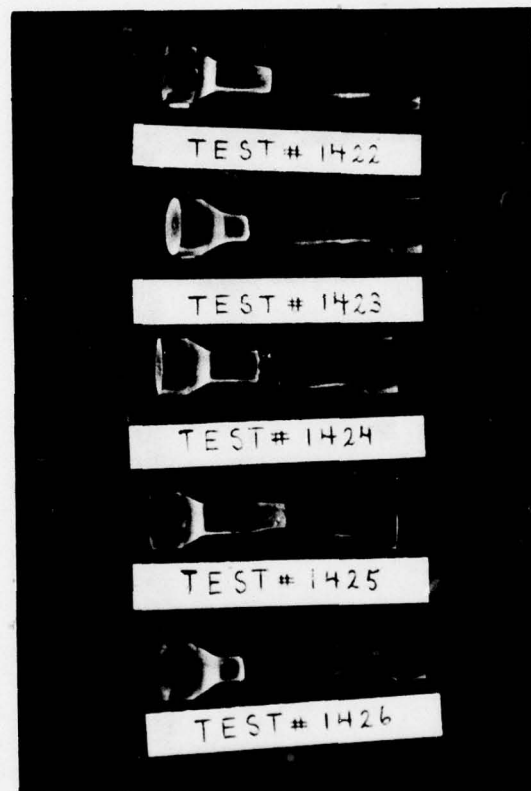


Figure L29.

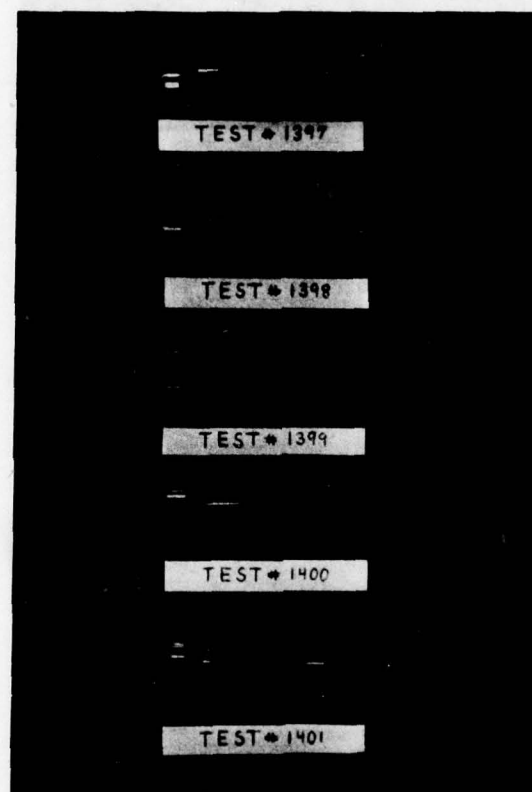


Figure L30.

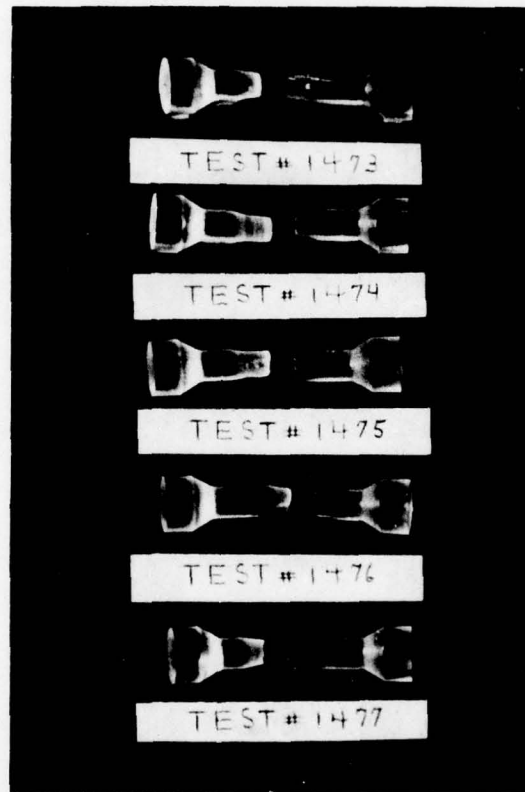


Figure L31.

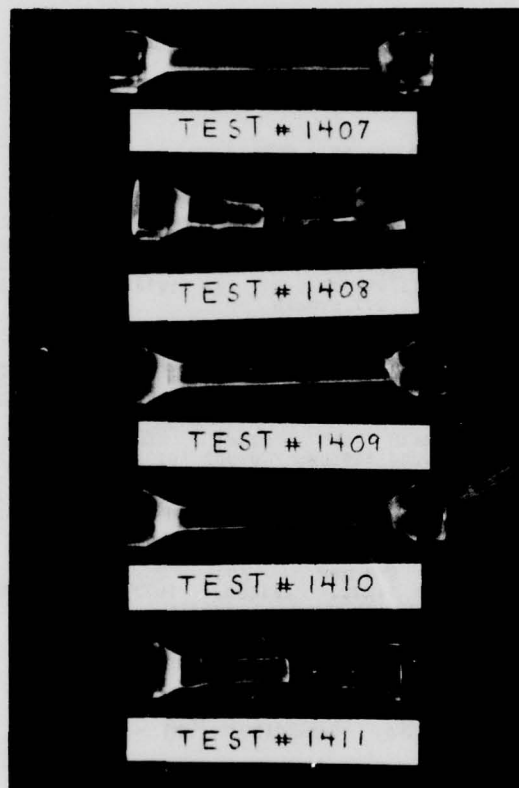


Figure L32.

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ex clst(stsstr) 'd1(swu52304) 1(test)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 *****
TENSST,CLG 12A,10-19-77; J.F.LURAE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
  ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YLS,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 1
TEST SPECIMENS- END POINT STRESS STRAIN
1 SWU523-1104 13775. 0.367
2 SWU523-1105 13395. 0.347
3 SWU523-1108 13398. 0.322
4 SWU523-1109 13296. 0.397
          AVG STD DEV      A      P      C
FRACTURE STRAINS = 0.358 0.032 0.136 0.227 0.276
FRACTURE STRESSES = 13465.800 211.262 11978.091 12546.526 12912.715
ORIGINAL CURVLS TRUNCATED AT 0.077 STRAIN
LSTL CURVE IS 3 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
          AVG STD DLV      A      B      C
YIELD STRESS = 11395.198 569.398 7385.498 9025.364 9904.514
SECANT TO YIELD STRESS =148143.487 96015. 117334. 128764.
          AVG      A      B      C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.002 286448. 0.002 126544. 0.002 191941. 0.002 227001.
4 0.008 292507. 0.008 194627. 0.008 234657. 0.008 256118.
6 0.013 301541. 0.013 218741. 0.013 252604. 0.013 270758.
8 0.020 302877. 0.020 246768. 0.020 269715. 0.020 282017.
STRAIN AT 2.D PT ON BASE CURVE= 0.002
          STRAIN STD DEV AVG      A      B      C
ELASTIC MODULUS AT 0.002 18222. 241300. 187272. 225727. 246343.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 282318.
WARNING-MAX SLOPE(E)= 321811. AT STRAIN= 0.011
AREA UNDER AVERAGE DESIGN CURVE= 4128.653

```

Figure L33. Computer Run - SWU523.

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ex clst(stsstr) 'd1(swu52307) d2(swu52304) 1(testst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 ****
TERST,CHG 12A,10-19-77; J.F.LURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
2
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YLS, 2=NO)
?
1
INPUT NUMBER TO BE DISCARDED & POSITION NUMBERS ONE AT A TIME
?
1
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SWU523-1107 20000. 0.444
3 SWU523-1103 15110. 0.470
4 SWU523-1099 14256. 0.487
5 SWU523-1098 19333. 0.547
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 1
6 SWU523-1104 13775. 0.367
7 SWU523-1105 13395. 0.347
8 SWU523-1108 13398. 0.322
9 SWU523-1109 13296. 0.397
AVG STD DEV A B C
FRACTURE STRAINS = 0.423 0.077 0.086 0.223 0.298
FRACTURE STRESSES = 15320.261 2753.439 3331.788 8210.882 10865.197
ORIGINAL CURVES TRUNCATED AT 0.103 STRAIN
BASE CURVE IS 3 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AVG STD DEV A B C
YIELD STRESS = 12422.918 1075.620 7739.668 9645.667 10682.565
SECANT TO YIELD STRESS = 120331.641 74968. 93430. 103474.
AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.007 312785. 0.007 160102. 0.007 222241. 0.007 256046.
4 0.011 320196. 0.011 141756. 0.011 238099. 0.011 268750.
6 0.016 322843. 0.016 211306. 0.016 256700. 0.016 281395.
8 0.024 314209. 0.024 218104. 0.024 257217. 0.024 278495.
STRAIN AT 2ND PT ON BASE CURVE= 0.002
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.002 43361. 308368. 113884. 193035. 236095.
CHECK ON CALC-12A1 MODULUS ON TEST CURVES= 310932.
SLOPING-TXK SLOPE(E)= 335433. AT STRAIN= 0.010
AREA UNDER AVERAGE DESIGN CURVE= 5422.871

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Figure L34. Computer Run - SWU523.

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ex clst(stsstr) 'a1(swu52311) 1(eksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 ****
TEST, CIG 12a, 10-10-77; J.F. LARKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
LATER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YLS, 2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 1
TEST SPECIMENS- END POINT STRESS STRAIN
1 SWU523-1111 15456. 0.252
2 SWU523-1112 20223. 0.466
3 SWU523-1113 19273. 0.539
4 SWU523-1114 21186. 0.293
AVG STD DEV A B C
FRACTURE STRAIN = 0.388 0.137 -0.579 -0.184 0.020
FRACTURE STRESSES = 19034.746 2510.378 1356.666 8586.554 12462.577
ORIGINAL CURVES TRUNCATED AT 0.095 STRAIN
BASE CURVE IS 2 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AVG STD DEV A B C
YIELD STRESS = 14973.781 1603.968 3678.639 8298.066 10774.593
SECANT TO YIELD STRESS = 157749.907 38755. 87421. 113511.
AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.008 358408. 0.008 23848. 0.008 160675. 0.008 234029.
4 0.020 348671. 0.020 95640. 0.020 199124. 0.020 254602.
6 0.029 327927. 0.029 83774. 0.029 183626. 0.029 237158.
8 0.046 273191. 0.046 62410. 0.046 148614. 0.046 194829.
STRAIN AT 2ND PT ON BASE CURVE= 0.004
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.004 48119. 358083. 23980. 160619. 233873.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 358366.
AREA UNDER AVERAGE DESIGN CURVE= 6005.582

```

Figure L35. Computer Run - SWU523.

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ex clst(stsstr) 'd1(swu52317) 1(teksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 ****
TEKSST,CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 1
TEST SPECIMENS- END POINT STRESS STRAIN
1 SWU523-1117 10183. 0.282
2 SWU523-1118 11592. 0.528
3 SWU523-1120 11751. 0.646
          AVG STD DEV A B C
FRACTURE STRAINS = 0.485 0.186 -1.474 -0.658 -0.221
FRACTURE STRESSES = 11175.433 863.491 2063.013 5660.646 7888.987
ORIGINAL CURVES TRUNCATED AT 0.079 STRAIN
BASE CURVE IS 2 OF CURVES USED.
YIELD STRESS IS STRLSS AT TRUNCATION STRAIN VALUE.
          AVG STD DEV A B C
YIELD STRESS = 8502.091 622.518 1932.662 4670.495 6132.789
SLCAINT TO YIELD STRESS =107296.791 24390. 58942. 77396.
          AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.017 191220. 0.017 154619. 0.017 169872. 0.017 178019.
4 0.037 180965. 0.037 89597. 0.037 127675. 0.037 148013.
6 0.056 146809. 0.056 55891. 0.056 93781. 0.056 114019.
8 0.079 107197. 0.079 24390. 0.079 58942. 0.079 77396.
STRAIN AT 2ND PT ON BASE CURVE= 0.009
          STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.009 5688. 189738. 349155. 282717. 247233.
CHECK ON CALC-MEAN MODULUS ON TEST CURVLS= 189754.
AREA UNDER AVERAGE DESIGN CURVE= 4461.568

```

Figure L36. Computer Run - SWU523.

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```

ex clst(stsstr) 'd1(swu56900) 1(tekst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF238 ****
TEKST,CHG 12,10-10-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YLS,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 1
TEST SPECIMENS-    LMD POINT STRESS    STRAIN
1  SWU569-1200      25869.    0.603
2  SWU569-1201      29222.    0.533
3  SWU569-1202      27475.    0.561
4  SWU569-1203      25188.    0.573
5  SWU569-1204      30249.    0.591

          AVG    STD DEV    A    B    C
FRACTURE STRAINS    =    0.572    0.027    0.417    0.480    0.514
FRACTURE STRESSES    = 27600.595 2149.433 15260.697 20277.475 22979.313
ORIGINAL CURVLS TRUNCATED AT 0.063 STRAIN
LAST CURVE IS 3 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
          AVG    STD DEV    A    B    C
YIELD STRESS    = 18768.524 1731.975 8825.255 12867.685 15044.778
SECANT TO YIELD STRESS =297601.284    139937.    204035.    238556.
          AVG    A    B    C
PC NO.  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC
2  0.015 467696.  0.015 58292.  0.015 224735.  0.015 314375.
4  0.032 448960.  0.032 128116.  0.032 258555.  0.032 328804.
6  0.048 376661.  0.048 175222.  0.048 257117.  0.048 301222.
8  0.572 48238.  0.417 36577.  0.480 42226.  0.514 44694.
STRAIN AT 2ND PT ON BASE CURVE= 0.007
          STRAIN  STD DEV    AVG    A    B    C
ELASTIC MODULUS AT 0.007 72652. 469073. 55088. 223393. 314036.
CHECK ON CALC-MEAN MODULUS ON TEST CURVLS= 469242.
WARNING-SLOPE(E)= 469211. AT STRAIN= 0.007
WARNING-SLOPE(E)= 469701. AT STRAIN= 0.008
WARNING-SLOPE(E)= 470219. AT STRAIN= 0.008
WARNING-SLOPE(E)= 470319. AT STRAIN= 0.010
WARNING-SLOPE(E)= 469666. AT STRAIN= 0.011
AREA UNDER AVERAGE DESIGN CURVE= 12583.622

```

Figure L37. Computer Run - SWU569.

THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES

?

1

DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO).

?

1

INPUT NUMBER TO BE DISCARDED & POSITION NUMBERS ONE AT A TIME

?

1

?

5

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

?

1 1

TEST SPECIMENS-	END POINT	STRESS	STRAIN
1 SWU569-1175		26489.	0.522
2 SWU569-1176		31076.	0.571
3 SWU569-1182		28562.	0.561
4 SWU569-1183		27561.	0.577

	AVG	STD DEV	A	B	C
FRACTURE STRAINS	= 0.558	0.025	0.385	0.456	0.493
FRACTURE STRESSES	= 28421.921	1961.578	14608.487	20257.832	23286.509

ORIGINAL CURVES TRUNCATED AT 0.057 STRAIN

BASE CURVE IS 2 OF CURVES USED.

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

	AVG	STD DEV	A	B	C
YIELD STRESS	= 18994.949	1631.966	7502.647	12202.708	14722.463
SECANT TO YIELD STRESS	= 334041.703		131940.	214595.	258907.

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.010	487726.	0.010	-42782.	0.010	174182.	0.010	290499.
4	0.023	490873.	0.023	27079.	0.023	216759.	0.023	318449.
6	0.039	442772.	0.039	165703.	0.039	279017.	0.039	339766.
8	0.057	334042.	0.057	131940.	0.057	214595.	0.057	258907.

STRAIN AT 2ND PT ON BASE CURVE= 0.005

	STRAIN	STD DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.005	76570.	487969.	-52073.	162791.	287198.	

CLICK ON CALC-MEAN MODULUS ON TEST CURVES= 488115.

WARNING-SLOPE (E)= 488270. AT STRAIN= 0.005

WARNING-SLOPE (E)= 489492. AT STRAIN= 0.005

WARNING-SLOPE (E)= 491455. AT STRAIN= 0.006

WARNING-SLOPE (E)= 493817. AT STRAIN= 0.007

WARNING-SLOPE (E)= 496207. AT STRAIN= 0.008

WARNING-SLOPE (E)= 498311. AT STRAIN= 0.008

WARNING-SLOPE (E)= 501548. AT STRAIN= 0.010

WARNING-SLOPE (E)= 501641. AT STRAIN= 0.010

WARNING-SLOPE (E)= 501976. AT STRAIN= 0.011

WARNING-SLOPE (E)= 502353. AT STRAIN= 0.011

WARNING-SLOPE (E)= 502493. AT STRAIN= 0.012

WARNING-SLOPE (E)= 502184. AT STRAIN= 0.013

WARNING-SLOPE (E)= 501389. AT STRAIN= 0.014

WARNING-SLOPE (E)= 498866. AT STRAIN= 0.016

WARNING-SLOPE (E)= 498647. AT STRAIN= 0.016

WARNING-SLOPE (E)= 497638. AT STRAIN= 0.016

WARNING-SLOPE (E)= 495589. AT STRAIN= 0.017

WARNING-SLOPE (E)= 492335. AT STRAIN= 0.018

WARNING-SLOPE (E)= 488015. AT STRAIN= 0.019

AREA UNDER AVERAGE DESIGN CURVE= 12565.936

Figure L38. Computer Run - SWU569.

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ex clst(stsstr) 'd1(swu569b7) 1(tekst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF238 *****
TLKSST,CHG 12,10-10-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
1
INPUT NUMBER TO BE DISCARDED & POSITION NUMBERS ONE AT A TIME
?
2
?
1
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 1
TEST SPECIMENS-   END POINT STRESS   STRAIN
? 3 SWU569-1189      28411.      0.556
? 4 ::::::::::SWU5      22860.      0.203
? 5 SWU569-1191      23527.      0.328

      AVG   STD DEV      A      B      C
FRACTURE STRAIN      = 0.362   0.179  -1.530  -0.741  -0.320
FRACTURE STRLSSES    = 24932.495 3030.633 -7049.777 6278.948 13397.905
ORIGINAL CURVES TRUNCATED AT 0.074 STRAIN
BASE CURVE IS 1 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
      AVG   STD DEV      A      B      C
YIELD STRESS      = 20549.995 2434.268 -5138.330 5567.078 11285.173
SECANT TO YIELD STRESS =279170.110      -69811.  75628.  153308.
      AVG      A      B      C
PC NO.  STRAIN  SLIC  STRAIN  SLIC  STRAIN  SLIC  STRAIN  SLIC
2  0.024 408733.  0.024-686881.  0.024-230280.  0.024 13594.
4  0.040 396526.  0.040-546653.  0.040-153580.  0.040 56363.
6  0.055 351776.  0.055-283039.  0.055 -18478.  0.055 122826.
8  0.074 279170.  0.074 -69811.  0.074 75628.  0.074 153308.
STRAIN AT 2ND PT ON BASE CURVE= 0.013
      STRAIN  STD DEV      AVG      A      B      C
ELASTIC MODULUS AT 0.013 105103.  411807. -694993. -233730. 12633.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 411918.
AREA UNDER AVERAGE DESIGN CURVE= 7537.340

```

Figure L39. Computer Run - SWU569.

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**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 ****

TEKSST,CHG 12A,10-19-77; J.F.BURKE X37544

THIS PROGRAM IS FOR TENSION TEST CURVES ONLY

ENTER NUMBER OF DATA FILES

?

1

DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)

?

2

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

?

1 1

TEST SPECIMENS- END POINT STRESS STRAIN

1	SWU569-1192	11342.	0.585
2	SWU569-1193	14188.	0.566
3	SWU569-1194	14694.	0.624
4	SWU569-1195	20827.	0.601
5	SWU569-1196	19112.	0.566

	AVG	STD DEV	A	B	C
FRACTURE STRAINS	= 0.588	0.025	0.446	0.504	0.535
FRACTURE STRESSES	= 16032.419	3861.936	-6138.957	2874.802	7729.256

ORIGINAL CURVES TRUNCATED AT 0.058 STRAIN

BASE CURVE IS 1 OF CURVES USED.

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

	AVG	STD DEV	A	B	C
YIELD STRESS	= 14157.837	1899.386	3253.460	7686.628	10074.157
SECANT TO YIELD STRESS	= 242204.727		55658.	131499.	172343.

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.018	349335.	0.018	10183.	0.018	148065.	0.018	222323.
4	0.034	342875.	0.034	29279.	0.034	156771.	0.034	225433.
6	0.046	299975.	0.046	66828.	0.046	161614.	0.046	212662.
8	0.054	259950.	0.054	61679.	0.054	142286.	0.054	135698.

STRAIN AT 2ND PT ON BASE CURVE= 0.009

	STRAIN	STD DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.009	59881.	355130.	18625.	155431.	229109.	

CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 354817.

WORKING-TAX SLOPE(E)= 357041. AT STRAIN= 0.012

AREA UNDER AVERAGE DESIGN CURVE= 8527.176

Figure L40. Computer Run - SWU569.

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```
ex clst(stsstr) 'd1(swu00127)
**** LOAD MODULE RELOCATION FACTOR = 0AF418 *****
TEKSSC,CPG 2GA,12-1*-77; J.F.BURKE X,7544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1;COMP=2.SHORT TENSION=2.
```

```
?
2
? ENTER NUMBER OF DATA FILES.
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 'O MAX
(1=YES,2=NO)
```

```
?
2
X-SCALE Y-SCALE TO CORRECT CENTER DIGITISED DATA
?
```

```
.01 1000
```

TEST SPECIMENS-	MAX STRESS	STRAIN AT MAX. STRESS
1 SWU001-1387	14378.	0.052
2 SWU001-1388	12055.	0.043
3 SWU001-1389	13762.	0.049
4 SWU001-1390	13775.	0.051

```
MAX STRAIN ON CURVE 1 OF 4= 0.052
```

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.014	372300.	0.014	255588.	0.014	303345.	0.014	328948.
4	0.038	320205.	0.038	202512.	0.038	300201.	0.038	313079.
0	0.052	200415.	0.052	103305.	0.052	203352.	0.052	224521.

STD DEV		AVG		A		B		C	
MAX STRESS	=	718.258	13509.217	5884.154	10780.130	11800.151			
STRAIN AT MAX STRESS	=	0.004	0.049	0.020	0.032	0.038			

```
STRAIN AT 2ND PT ON BASE CURVE= 0.005
```

ELASTIC MODULUS AT 0.005	STRAIN	STD DEV	AVG	A	B	C
CHECK ON CALC-MEAN MODULUS ON TEST CURVES=	308070.	DELTA STRAIN= 0.0001				

Figure L41. Computer - SWU601.

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ex clst(stsstr) 'a1(swu601f1) 1(teksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 ****
TERSET,CIS 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
N-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SWU601-1325 11535. 0.439
2 SWU601-1326 14454. 0.666
3 SWU601-1329 16065. 0.554
4 SWU601-1330 19435. 0.748
5 SWU601-1331 15525. 0.515
6 SWU601-1364 18624. 0.673
AVG STD DEV A B C
FRACTURE STRAINS = 0.599 0.115 0.015 0.252 0.380
FRACTURE STRESSES = 16606.331 2921.195 1819.244 7825.220 11070.667
ORIGINAL CURVES TRUNCATED AT 0.060 STRAIN
BASE CURVE IS 2 OF CURVES USED.
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0016 580. 0.3190 0.3693
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AVG STD DEV A B C
YIELD STRESS = 12004.126 928.946 7301.800 9211.713 10243.773
SLCAWT TO YIELD STRESS =199301.454 121230. 152940. 170075.
AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.010 390768. 0.010 270881. 0.010 319575. 0.010 345888.
4 0.021 360741. 0.021 268745. 0.021 306111. 0.021 326302.
6 0.037 291718. 0.037 181807. 0.037 226449. 0.037 250572.
8 0.060 199301. 0.060 121230. 0.060 152940. 0.060 170075.
STRAIN AT 2ND PT ON BASE CURVE= 0.005
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.005 31491. 401812. 309396. 346932. 367215.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 402386.
WARNING-MAX SLOPE(E)= 414073. AT STRAIN= 0.006
AREA UNDER AVERAGE DESIGN CURVE= 8211.847

```

Figure L42. Computer Run - SWU601.

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THIS PROGRAM IS FOR TENSION TEST CURVES ONLY.
ENTER NUMBER OF DATA FILES

?

1

DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)

?

2

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

?

.01 1000

TEST SPECIMENS-	END POINT STRESS	STRAIN
1 SWU601- 1372	10411.	0.542
2 SWU601- 1373	11505.	0.594
3 SWU601- 1374	10450.	0.539
4 SWU601- 1375	10172.	0.483

	AVG	STD DEV	A	B	C
FRACTURE STRAINS	= 0.540	0.045	0.221	0.352	0.421
FRACTURE STRESSES	= 10634.500	593.203	6457.165	8165.590	9081.495

ORIGINAL CURVES TRUNCATED AT 0.060 STRAIN
BASE CURVE IS 1 OF CURVES USED.

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0041	1075.	0.3810	0.4179
	0.0050	1332.	0.3810	0.3972
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0041	1075.	0.3810	0.4179
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0043	1129.	0.3810	0.4351
	0.0051	1364.	0.3810	0.3919
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC
	0.0086	2527.	0.3810	0.3936

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

	AVG	STD DEV	A	B	C
YIELD STRESS	= 9724.034	212.400	8228.315	8840.027	9167.972
SECANT TO YIELD STRESS	= 162497.853		137503.	147725.	153206.

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.007	276535.	0.007	175621.	0.007	216892.	0.007	239018.
4	0.018	309728.	0.018	247078.	0.018	272700.	0.018	286437.
6	0.031	279608.	0.031	242218.	0.031	257509.	0.031	265707.
8	0.051	190475.	0.051	163228.	0.051	174371.	0.051	180345.

STRAIN AT 2ND PT ON BASE CURVE= 0.007

	STRAIN	STD DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.007	5128.	321732.	352165.	339713.	333046.	

CHECK ON CALC-ELASTIC MODULUS ON TEST CURVES= 322699.
WARNING-MAX SLOPE(E)= 335811. AT STRAIN= 0.018
OK/NO HAS ROOTS ON PC 1 0.823 0.510
AREA UNDER AVERAGE DESIGN CURVE= 5302.425

Figure L43. Computer Run - SWU601.

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ex clst(stsstr) 'a1(swu601rh) 1(teksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 ****
TEKSST,CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SWU601RH-132 15357. 0.509
2 SWU601RH-133 14493. 0.479
3 SWU601RH1337 13492. 0.376
4 SWU601RH1337 13789. 0.506
          AVG STD DEV
FRACTURE STRAINS = 0.468 0.063
FRACTURE STRESSES = 14282.750 830.119 8437.052 10827.795 12109.498
ORIGINAL CURVES TRUNCATED AT 0.059 STRAIN
BASE CURVE IS 4 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
          AVG STD DEV
YIELD STRESS = 11972.053 203.551 10538.646 11124.373 11439.156
DEVIAT TO YIELD STRESS =202514.546 178264. 168184. 193500.
          AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.005 368518. 0.005 122415. 0.005 223065. 0.005 277025.
4 0.015 361696. 0.015 285327. 0.015 316560. 0.015 333304.
6 0.027 338550. 0.027 328910. 0.027 332652. 0.027 334966.
8 0.044 265092. 0.044 243339. 0.044 252236. 0.044 257005.
STRAIN AT 2ND PT ON BASE CURVE= 0.005
          STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.005 10216. 362791. 301317. 326459. 339937.
CHECK ON CALC-ELAS MODULUS ON TEST CURVES= 362921.
WARNING-MAX SLOPE(E)= 366647. AT STRAIN= 0.016
AREA UNDER AVERAGE DESIGN CURVE= 5852.505

```

Figure L44. Computer Run - SWU601RH.

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TEST SPECIMENS-		END POINT	STRESS	STRAIN
1	SWU611-1422		27452.	0.543
2	SWU611-1423		26208.	0.461
3	SWU611-1424		18008.	0.060
4	SWU611-1425		26583.	0.478
5	SWU611-1426		28462.	0.550

STRAIN AT FRACTURE POINT IS NOT NORMAL

NOT NORMAL	STRAIN	SSTRESS	DCPIT	DCAC	A	B	C
	0.4611	26208.	0.3370	0.3770			
FRACTURE STRAINS	=	0.420	0.206		-0.760	-0.280	-0.022
FRACTURE STRESSES	=	25558.517	3763.201		3053.463	12736.084	17467.441

ORIGINAL CURVES TRUNCATED AT 0.078 STRAIN
BASE CURVE IS 1 OF CURVES USED.

NOT NORMAL	STRAIN	SSTRESS	DCPIT	DCAC
	0.0120	4871.	0.3370	0.3426
	0.0129	5234.	0.3370	0.3581
	0.0139	5613.	0.3370	0.3588
	0.0148	6005.	0.3370	0.3490
	0.0157	6398.	0.3370	0.3431
	0.0167	6790.	0.3370	0.3392

NOT NORMAL	STRAIN	SSTRESS	DCPIT	DCAC
	0.0167	6790.	0.3370	0.3392

NOT NORMAL	STRAIN	SSTRESS	DCPIT	DCAC
	0.0670	10637.	0.3370	0.3390

NOT NORMAL	STRAIN	SSTRESS	DCPIT	DCAC
	0.0670	10637.	0.3370	0.3390
	0.0678	10658.	0.3370	0.3506
	0.0686	10711.	0.3370	0.3388

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

YIELD STRESS	AVG	STD DEV	A	B	C
	= 20086.301	600.054	16641.302	18041.018	18706.185
SECANT TO YIELD STRESS	= 257319.747		213147.	231120.	240702.

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.011	425474.	0.011	245174.	0.011	318475.	0.011	357051.
4	0.022	420971.	0.022	265429.	0.022	328665.	0.022	362721.
6	0.033	403138.	0.033	288771.	0.033	335267.	0.033	360309.
8	0.047	366712.	0.047	279133.	0.047	314738.	0.047	333914.

STRAIN AT 2ND PT ON BASE CURVE = 0.006

ELASTIC MODULUS AT 0.006	STRAIN	STD DEV	AVG	A	B	C
		30107.	423504.	264155.	328975.	363884.

CHECK ON CALC-MEAN MODULUS ON TEST CURVES = 423667.

WARNING-SLOPE(E) = 423786. AT STRAIN = 0.008
 WARNING-SLOPE(F) = 424361. AT STRAIN = 0.008
 WARNING-SLOPE(E) = 425259. AT STRAIN = 0.009
 WARNING-SLOPE(E) = 427833. AT STRAIN = 0.011
 WARNING-SLOPE(E) = 428045. AT STRAIN = 0.011
 WARNING-SLOPE(F) = 428802. AT STRAIN = 0.012
 WARNING-SLOPE(E) = 429622. AT STRAIN = 0.012
 WARNING-SLOPE(E) = 429810. AT STRAIN = 0.013
 WARNING-SLOPE(F) = 428830. AT STRAIN = 0.014
 WARNING-SLOPE(F) = 426617. AT STRAIN = 0.015

AREA UNDER AVERAGE DESIGN CURVE = 8849.593

Figure L45. Computer Run - SWU611.

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ex clst(stsstr) 'd1(su61107) g(e77623-d0211-reg007) 1(tekst)'
TEKST,CHG 12,10-10-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GEPER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SWU611-1307 16457. 0.444
2 SWU611-1308 10540. 0.632
3 SWU611-1309 18347. 0.570
4 SWU611-1400 15580. 0.475
5 SWU611-1401 15886. 0.478
          AVG STD DEV      A      B      C
FRACTURE STRAINS = 0.520 0.078 0.060 0.252 0.351
FRACTURE STRESSES = 17162.101 1700.398 7348.450 11338.194 13486.804
ORIGINAL CURVES TRUNCATED AT 0.065 STRAIN
BASE CURVE IS 5 OF CURVES USED.
NOT NORMAL STRAIN STRESS DCPT DCAC
0.0240 0242. 0.3370 0.3526
NOT NORMAL STRAIN STRESS DCPT DCAC
0.0240 0242. 0.3370 0.3526
0.0242 0041. 0.3370 0.3620
0.0305 10562. 0.3370 0.3408
NOT NORMAL STRAIN STRESS DCPT DCAC
0.0408 13122. 0.3370 0.3514
0.0532 13326. 0.3370 0.3621
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
          AVG STD DEV      A      B      C
YIELD STRESS = 13830.513 234.125 12486.401 13032.940 13327.144
SECANT TO YIELD STRESS = 212656.068 101080. 200301. 204016.
          AVG      A      B      C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.024 355249. 0.024 200390. 0.024 316820. 0.024 331005.
4 0.065 212656. 0.065 101080. 0.065 200301. 0.065 204016.
STRAIN AT 2ND PT ON BASE CURVE= 0.013
          STRAIN STD DEV AVG      A      B      C
ELASTIC MODULUS AT 0.013 13330. 343423. 322886. 331236. 335732.
CHECK ON CALC-MODULUS ON TEST CURVES= 344748.
AREA UNDER AVERAGE DESIGN CURVE= 7658.367

```

Figure L46. Computer Run - SWU611.

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*Z clat'statr' 'dl(suu61173) g(077623.d0211.f0001) ((t0k00t))
*** LOAD MODULE RELOCATION FACTOR = 00F540 22222222
TEST.CMG 120, 3-07-78, J.F.BURKE X37E44
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?

DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1-VES, 2-NO)
?

X-SCALE Y-SCALE TO CORRECT GENSER DIGITISED DATA
?

1 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SUUS11-1473 14684. 0.458
2 SUUS11-1474 15477. 0.507
INDISI CONVERT - ILLEGAL DECIMAL CHARACTER P
0.12102000+02 0.14078000+02 0.19752000+01 0.197 20000+010000000
TRACEBACK ROUTINE CALLED FROM ISM REG. 14 REG. 15 REG. 0 REG. 1
IDCON 000C7FA0 000C83B4 00000130 000C7FB0
MAIN 00030A02 000AF578 00000000 000AACB4
ENTRY POINT- 000AF578
STANDARD FIXUP TAKEN, EXECUTION CONTINUING
INDISI CONVERT - ILLEGAL DECIMAL CHARACTER
0.12102000+02 0.14078000+02 0.19752000+01 0.197 20000+010000000
TRACEBACK ROUTINE CALLED FROM ISM REG. 14 REG. 15 REG. 0 REG. 1
IDCON 000C7FA0 000C83B4 00000140 000C7FB0
MAIN 00030A02 000AF578 00000000 000AACB4
ENTRY POINT- 000AF578
STANDARD FIXUP TAKEN, EXECUTION CONTINUING
3 SUUS11-1475 14078. 0.437
4 SUUS11-1476 14874. 0.486
5 SUUS11-1477 14774. 0.486
AUG STD DEV A B C
FRACTURE STRAINS 0.475 0.027 0.317 0.381 0.416
FRACTURE STRESSES 14777.400 488.166 11911.657 13076.741 13704.193
ORIGINAL CURVES TRUNCATED AT 0.070 STRAIN
BASE CURVE IS 5 OF CURVES USED.
NOT NORMAL STRAIN STRESS DCRT DCAC
0.0378 10741. 0.3370 0.3382
0.0396 11006. 0.3370 0.3442
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AUG STD DEV A B C
YIELD STRESS 12298.014 154.052 11410.155 11771.112 11985.512
SECANT TO YIELD STRESS 176164.079 163448. 168610. 171401.
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.000 454817. 0.000 221848. 0.000 316562. 0.000 367572.
4 0.023 362957. 0.023 291841. 0.023 320753. 0.023 336380.
6 0.043 286082. 0.043 231276. 0.043 246485. 0.043 253047.
8 0.070 176164. 0.070 163448. 0.070 168610. 0.070 171401.
STRAIN AT 2ND PT ON BASE CURVE- 0.005
STRAIN STD DEV AUG A B C
ELASTIC MODULUS AT 0.005 42673. 443081. 521487. 480053. 478010.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES- 440550.
WARNING-MAX SLOPE(E)- 440553. AT STRAIN- 0.005
AREA UNDER AVERAGE DESIGN CURVE- 6118.886

```

Figure L47. Computer Run - SWU611.

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ex clst(stsstr) 'd1(swu61107) 1(tekst)'
TEKST,CHG 12,10-10-77; J.F.BUPKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GPBEP DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SWU611-1407 15003. 0.748
2 SWU611-1408 12758. 0.500
3 SWU611-1409 14910. 0.752
4 SWU611-1410 14858. 0.733
5 SWU611-1411 11282. 0.486
      AVG STD DEV A B C
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.7326 14858. 0.3370 0.3430
FRACTURE STRAINS = 0.662 0.119 -0.022 0.256 0.406
FRACTURE STRESSES = 13763.840 1675.998 4141.935 8653.715 10160.448
ORIGINAL CURVES TRUNCATED AT 0.055 STRAIN
BASE CURVE IS 4 OF CURVES USED.
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0020 668. 0.3370 0.3412
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
      AVG STD DEV A B C
YIELD STRESS = 11269.735 295.280 9574.532 10263.716 10634.883
SECANT TO YIELD STRESS = 203690.560 173050. 185507. 192215.
      AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.012 343316. 0.012 228700. 0.012 275350. 0.012 300426.
4 0.026 304846. 0.026 231920. 0.026 261574. 0.026 277530.
6 0.038 265595. 0.038 222218. 0.038 239853. 0.038 249350.
8 0.048 230308. 0.048 197300. 0.048 210770. 0.048 217084.
STRAIN AT 2ND PT ON BASE CURVE= 0.006
      STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.006 20430. 348392. 257715. 294580. 314434.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 347010.
AREA UNDER AVERAGE DESIGN CURVE= 7008.643

```

Figure L48. Computer Run - SWU611.

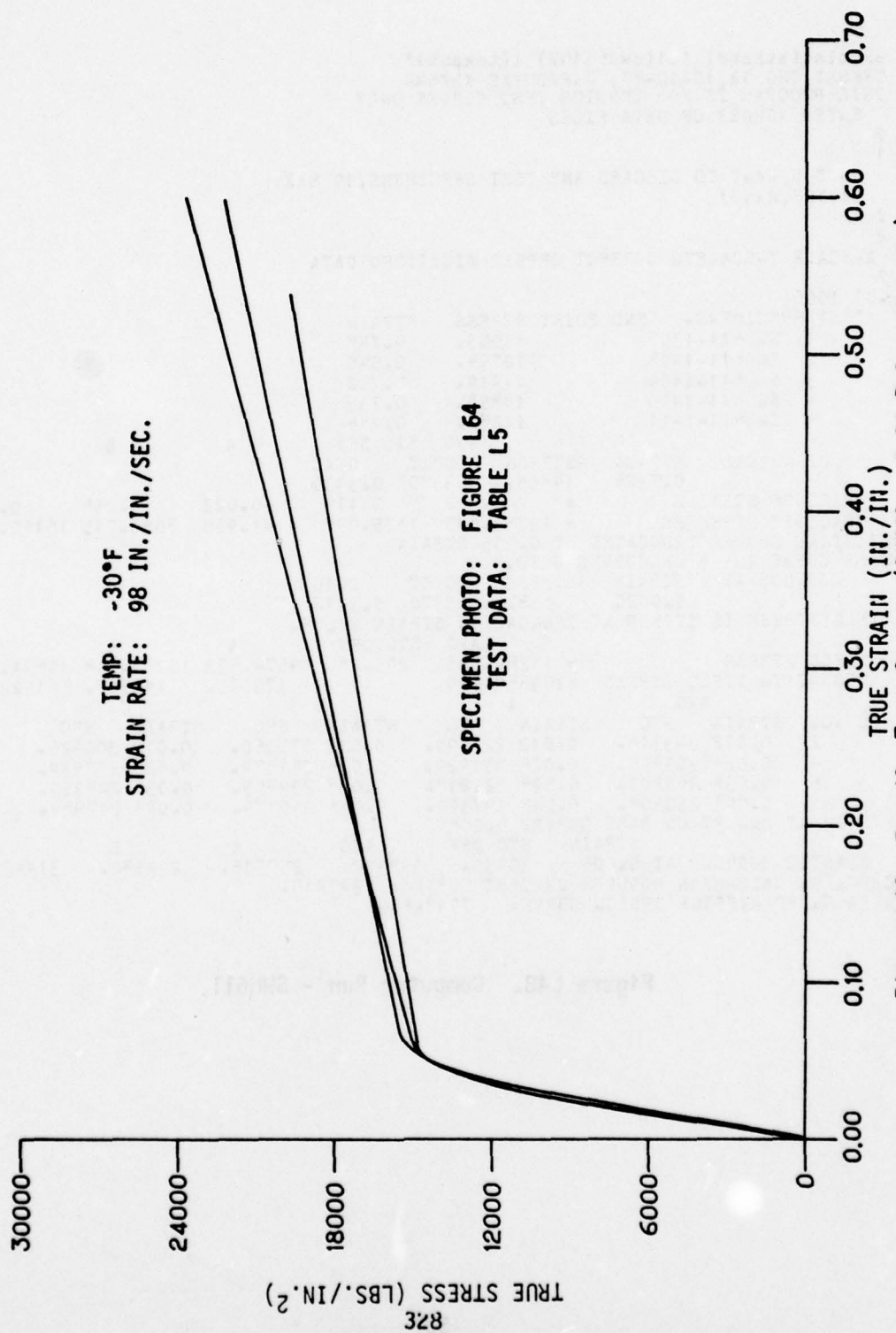


Figure L49. Tensile Test Curves (SK601 - 0.20 Polycarbonate).

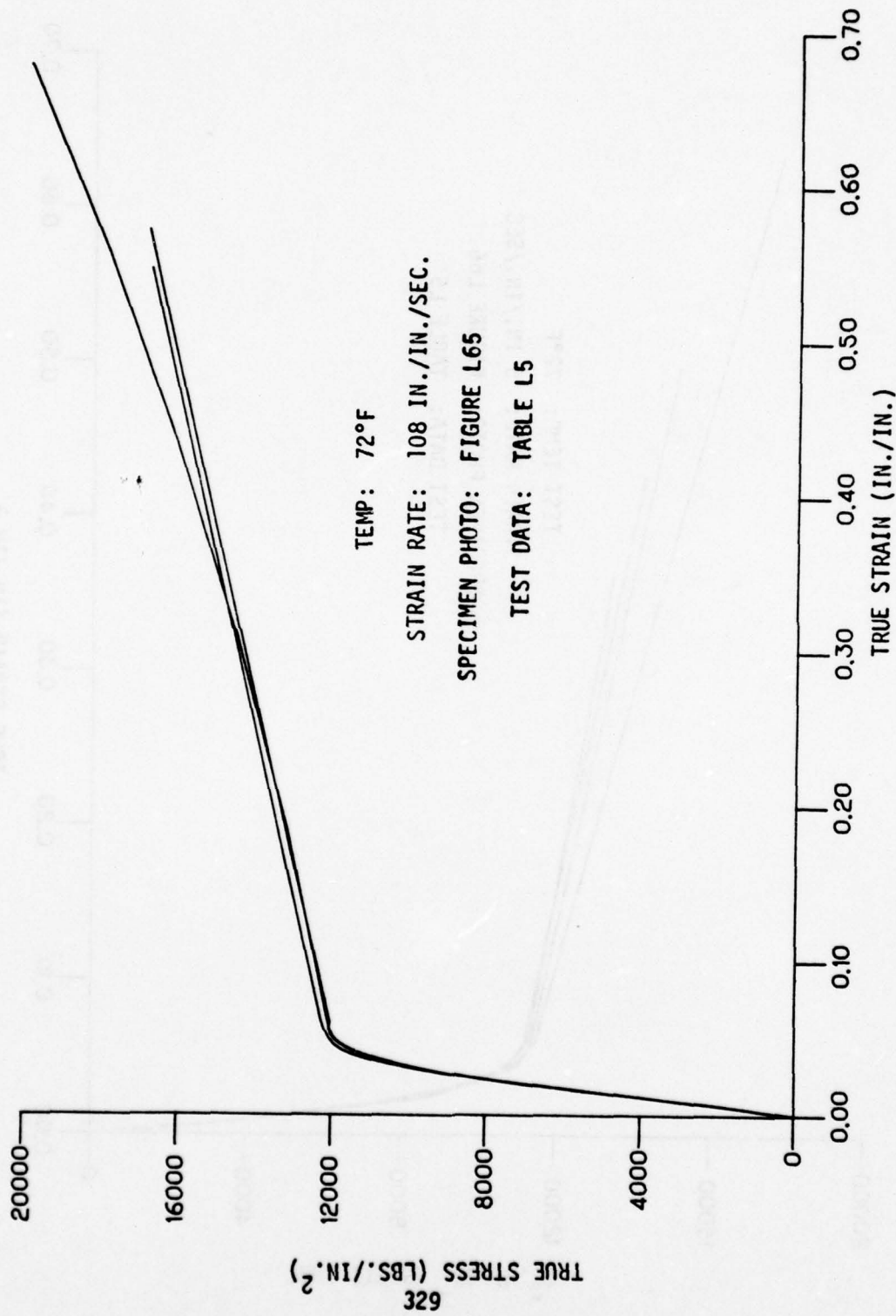


Figure L50. Tensile Test Curves (SK601 - 0.20 Polycarbonate)

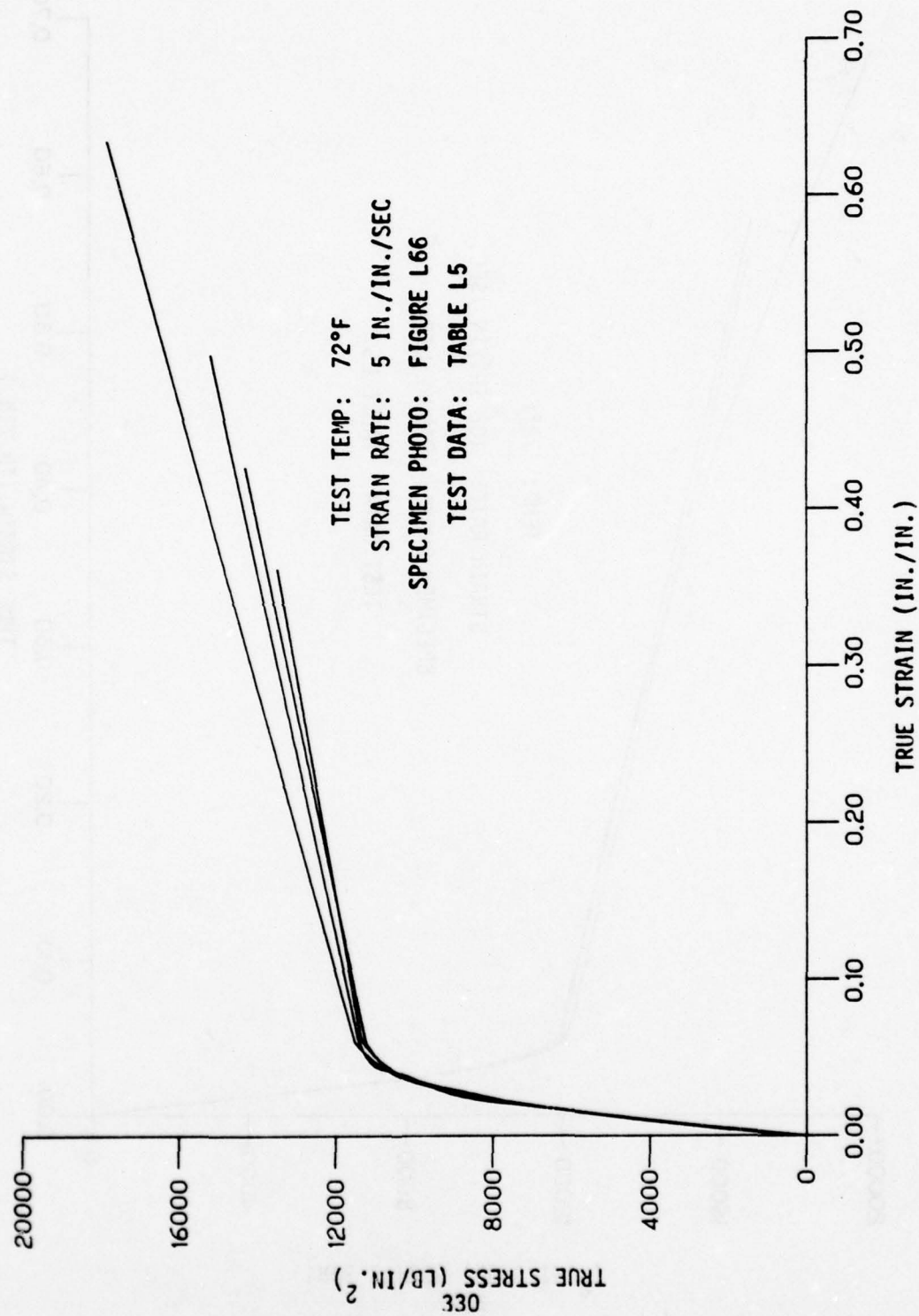


Figure L51. Tensile Test Curves (SK601 - 0.200 Polycarbonate).

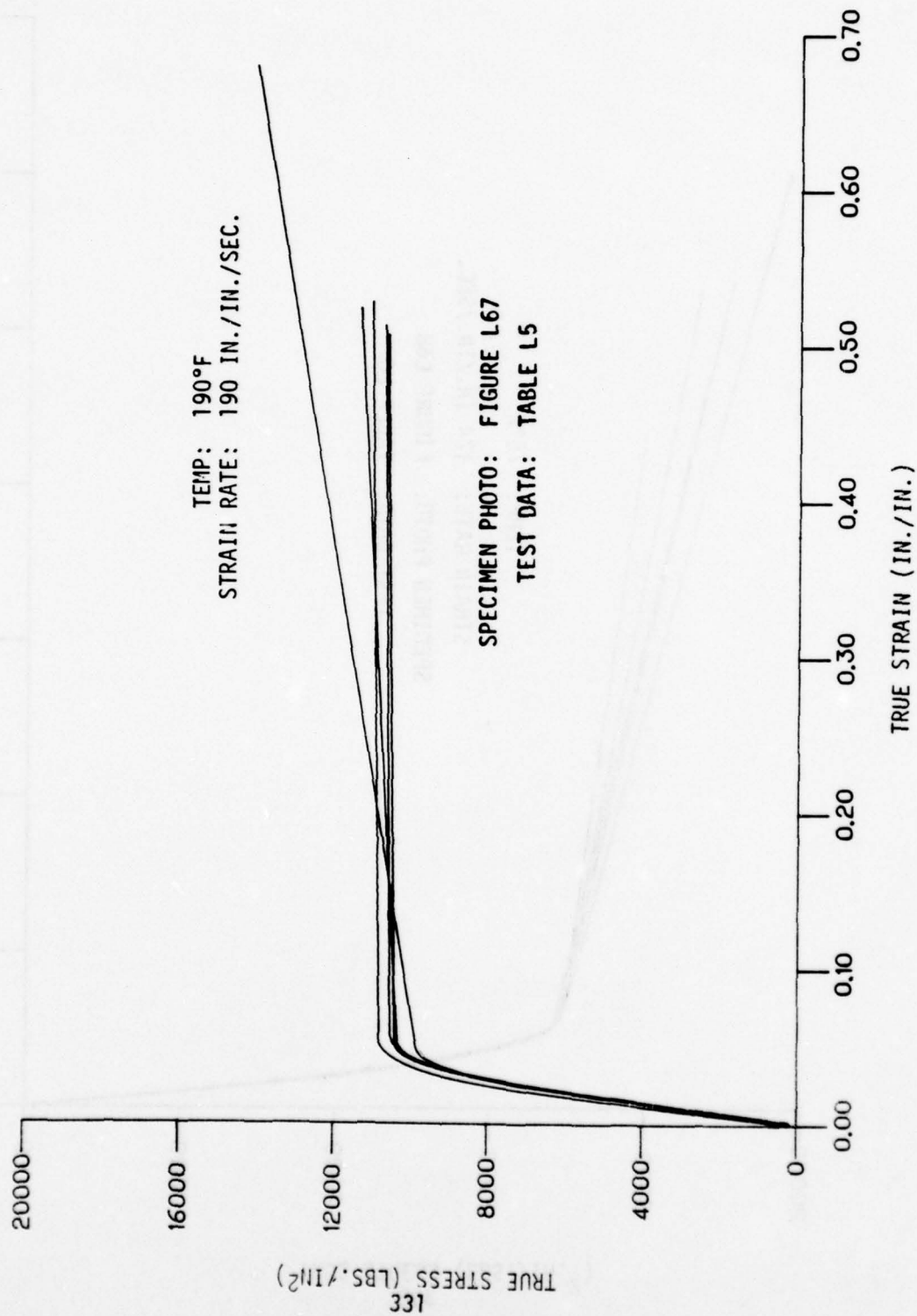


Figure L52 Tensile Test Curves (SKG01 -0.20 Polycarbonate.).

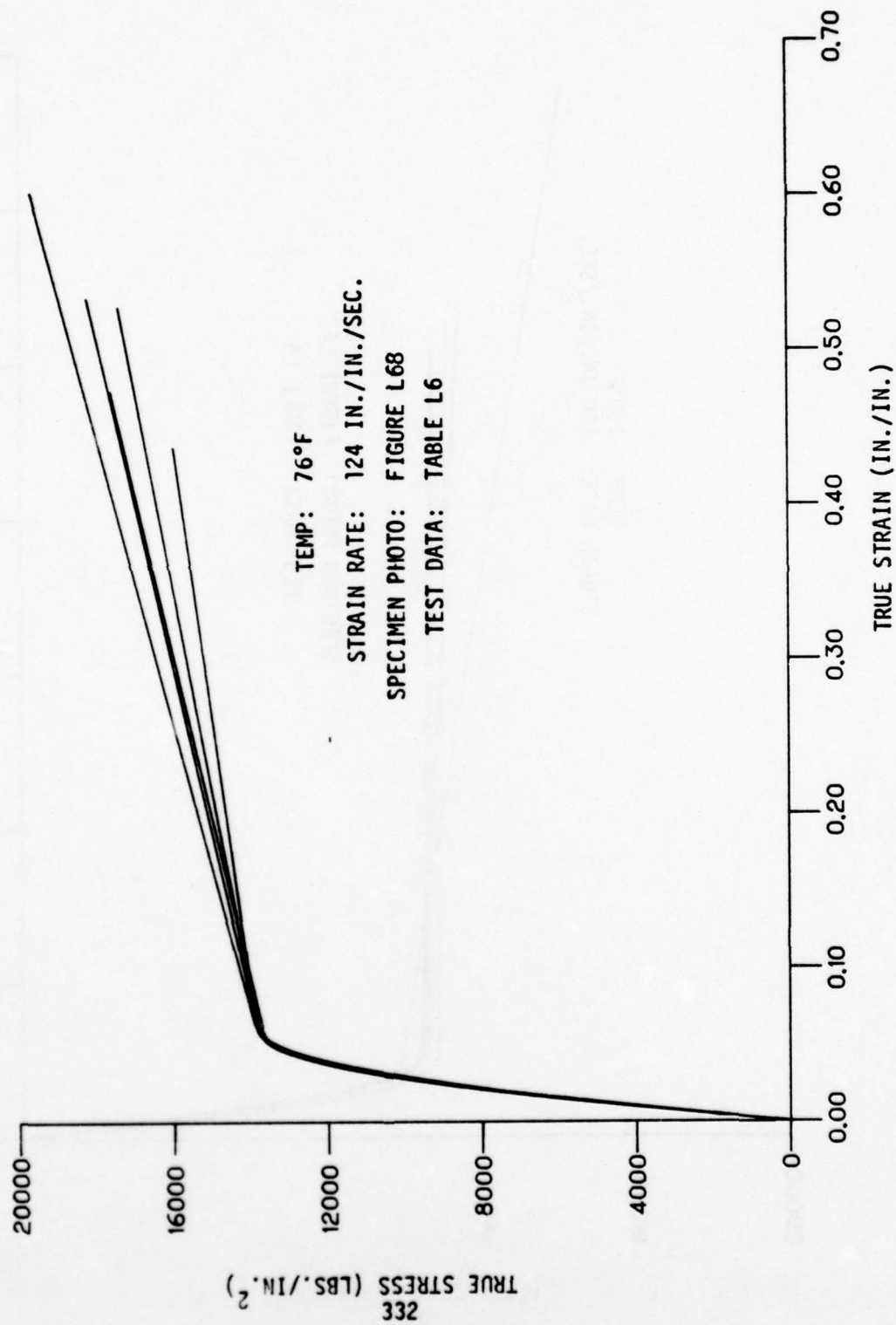


Figure L53. Tensile Test Curves (SK611 - 0.30 Polycarbonate)

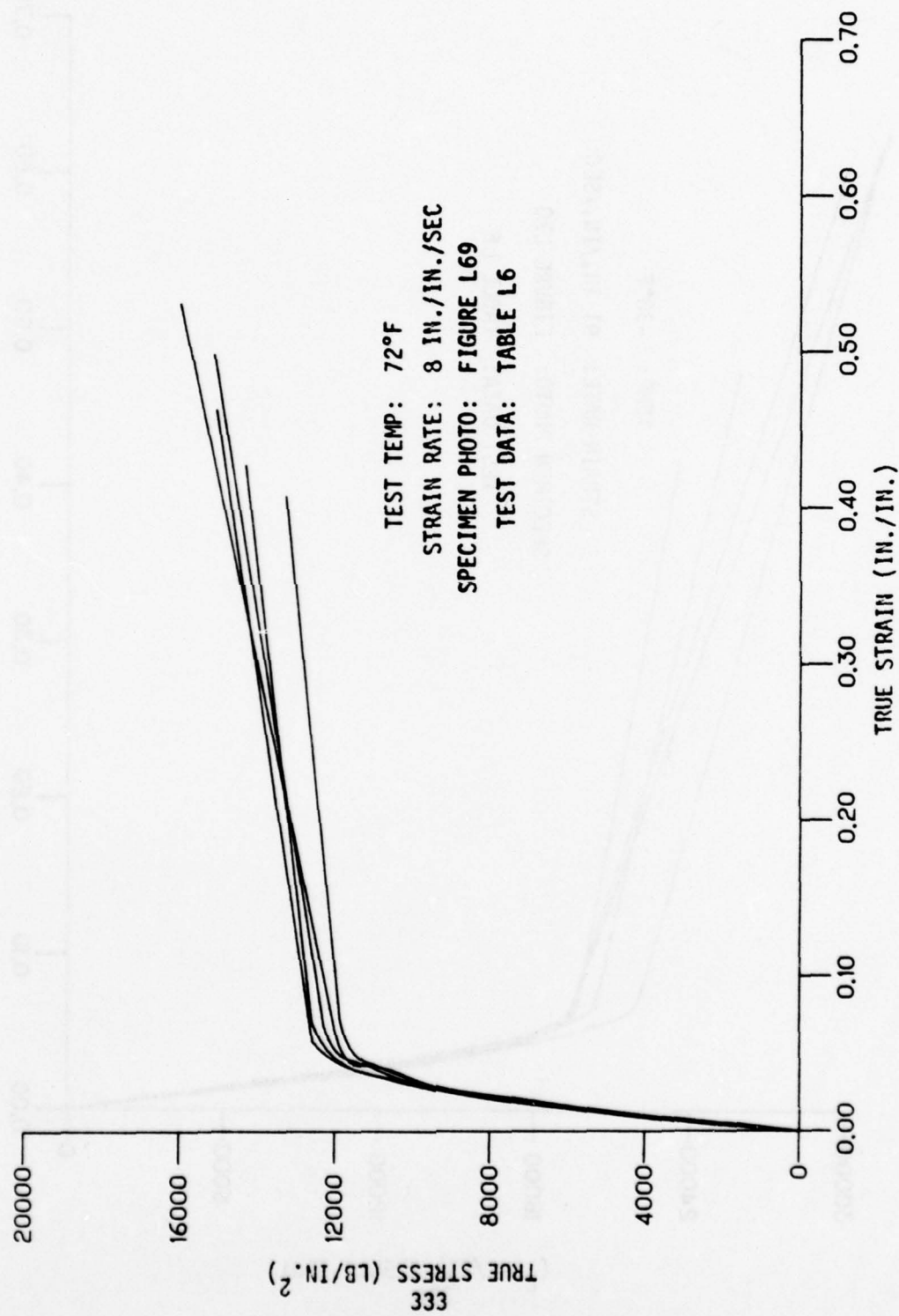


Figure L54. Tensile Test Curves (SK611 - 0.30 Polycarbonate).

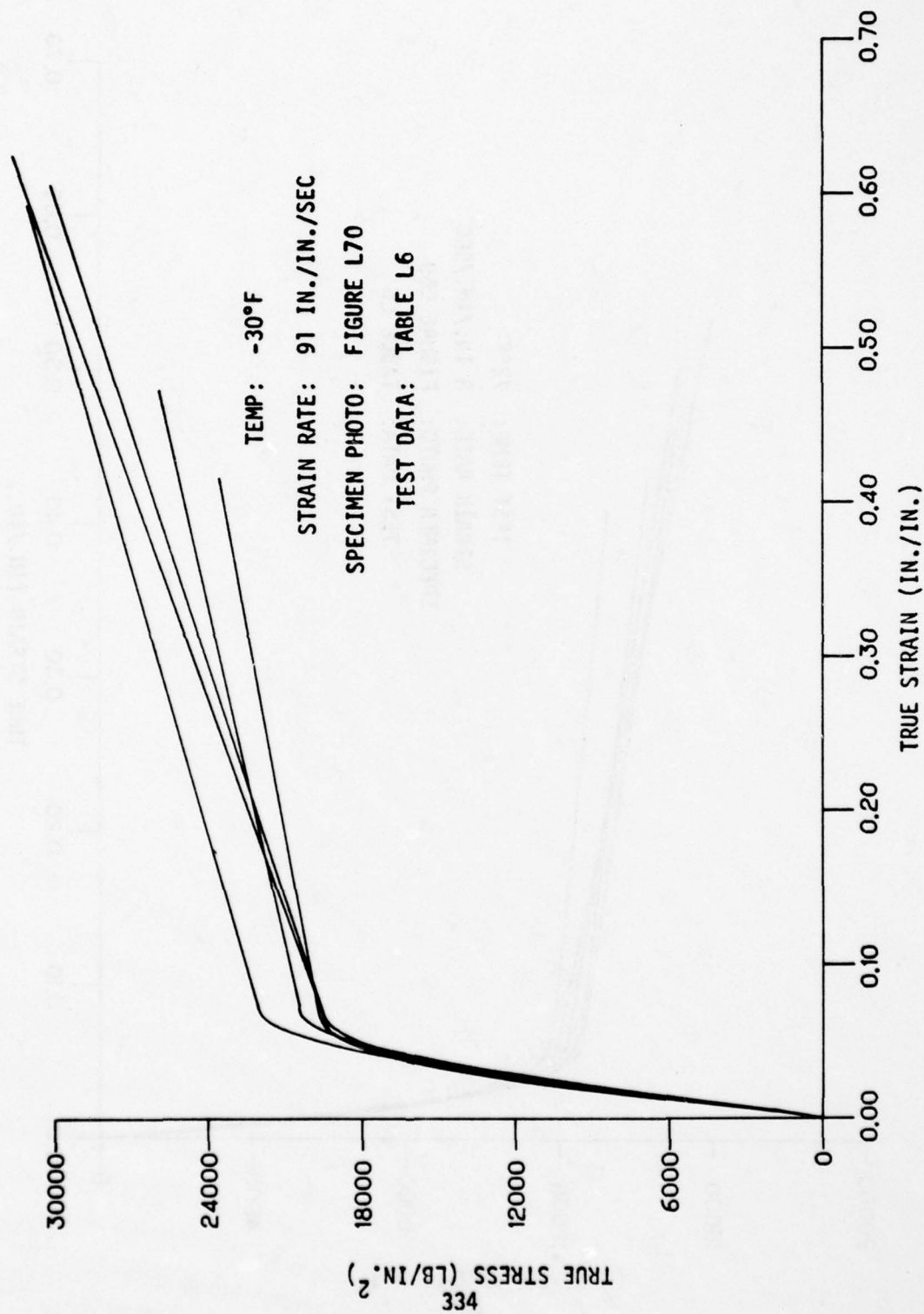


Figure L55. Tensile Test Curves (SK611 - 0.28 Polycarbonate).

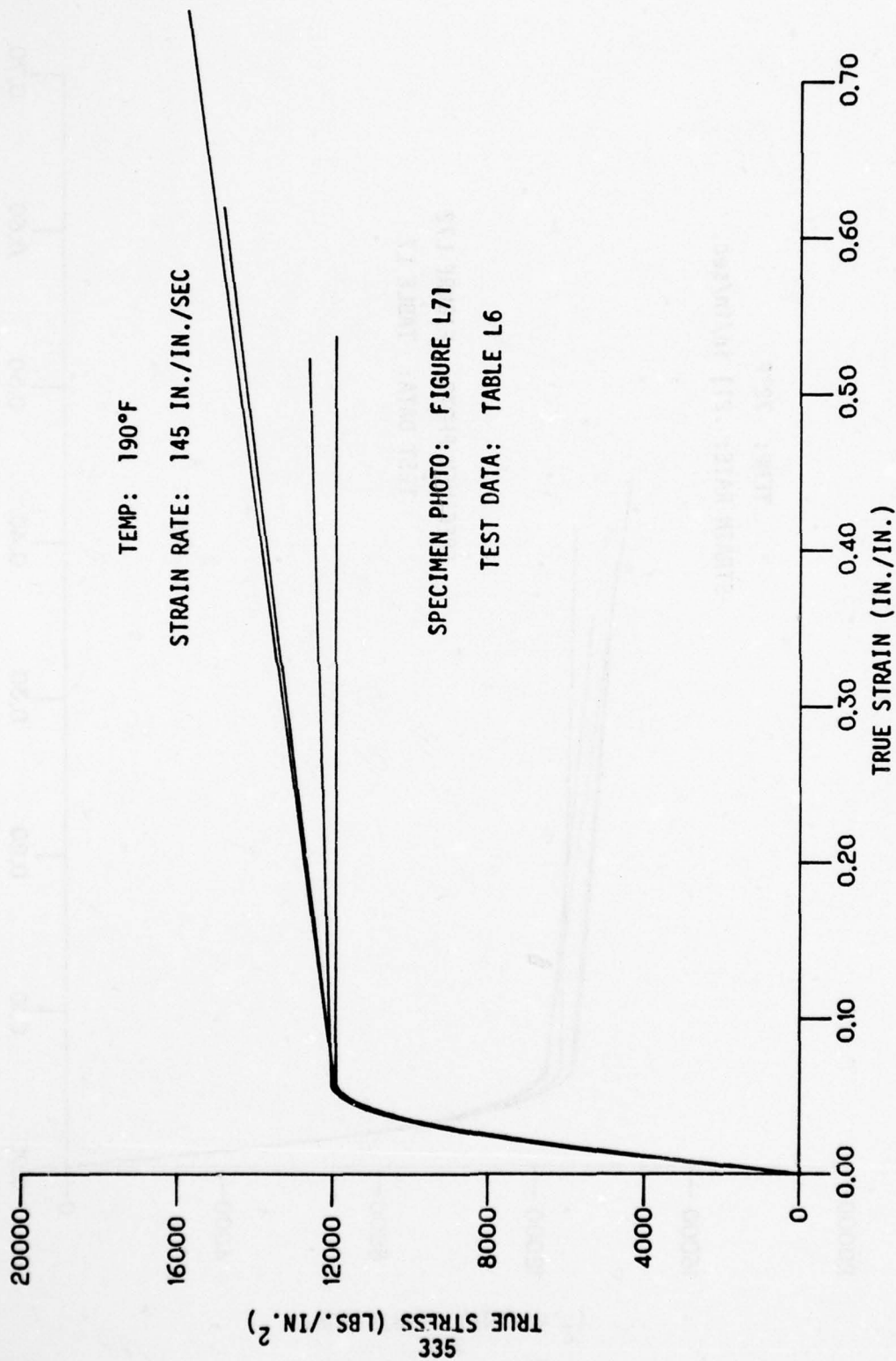


Figure L56. Tensile Test Curves (SK611 - 0.28 Polycarbonate)

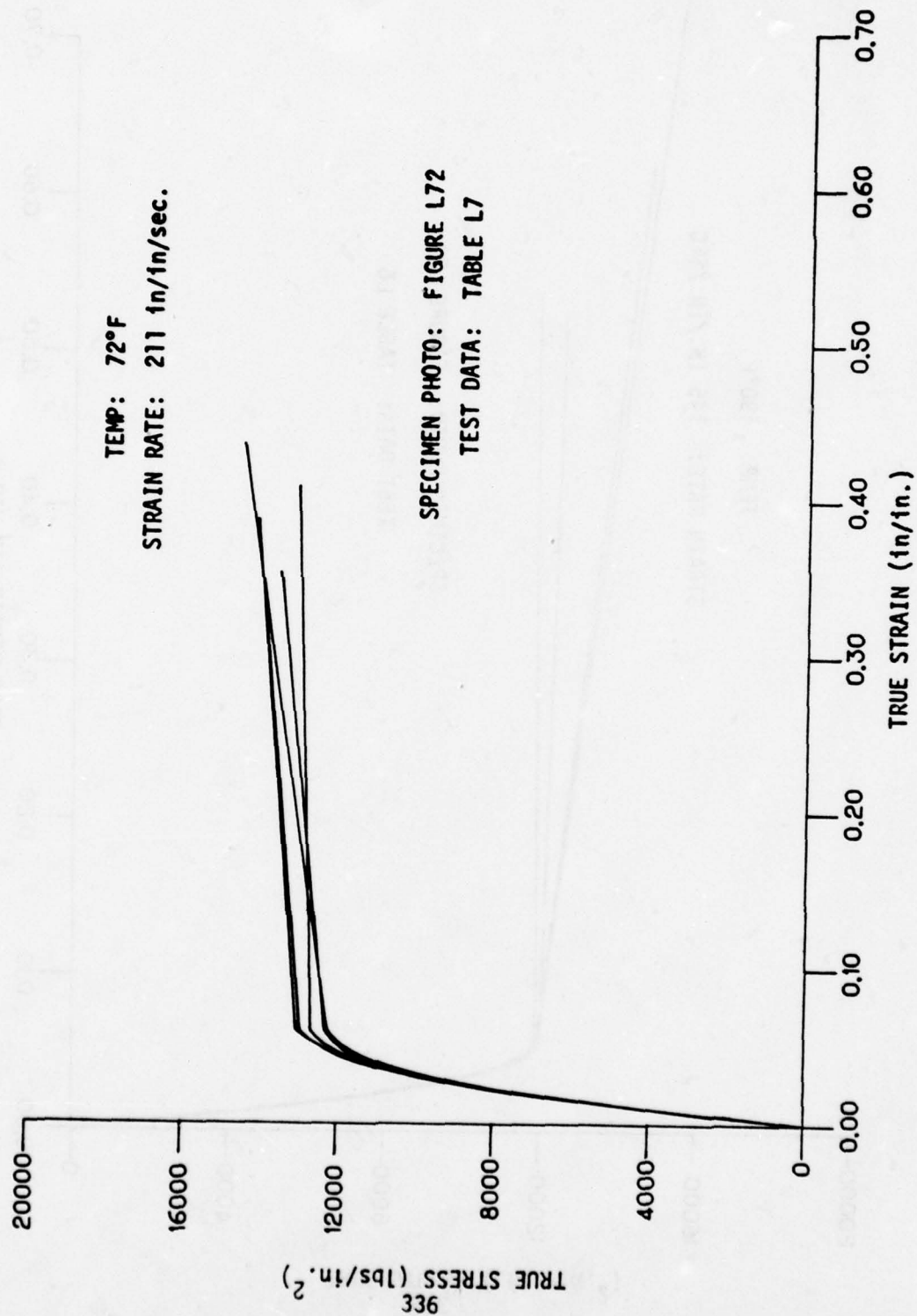
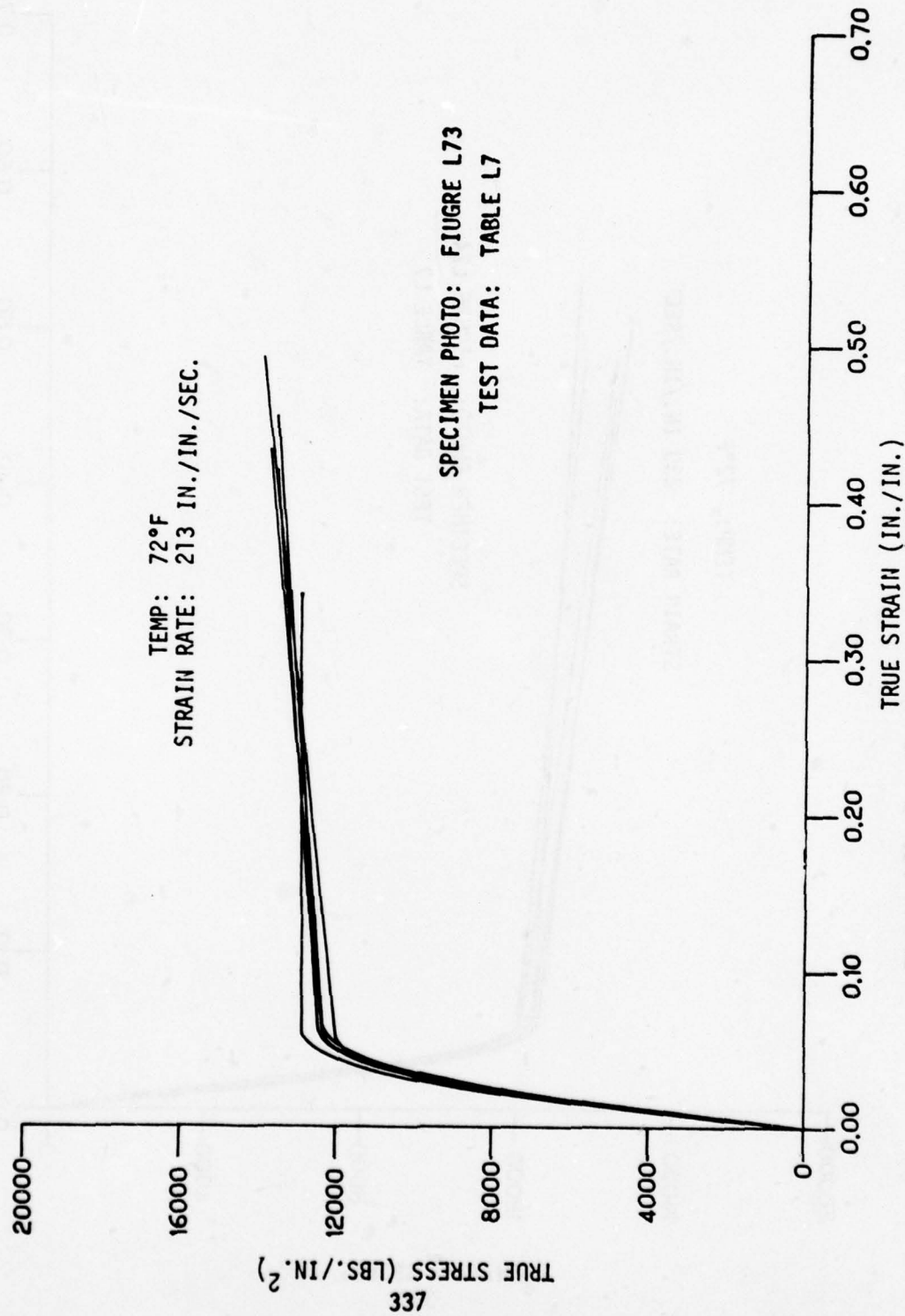


Figure L57. Tensile Test Curves (TEX601RH - 0.20 Polycarbonate).



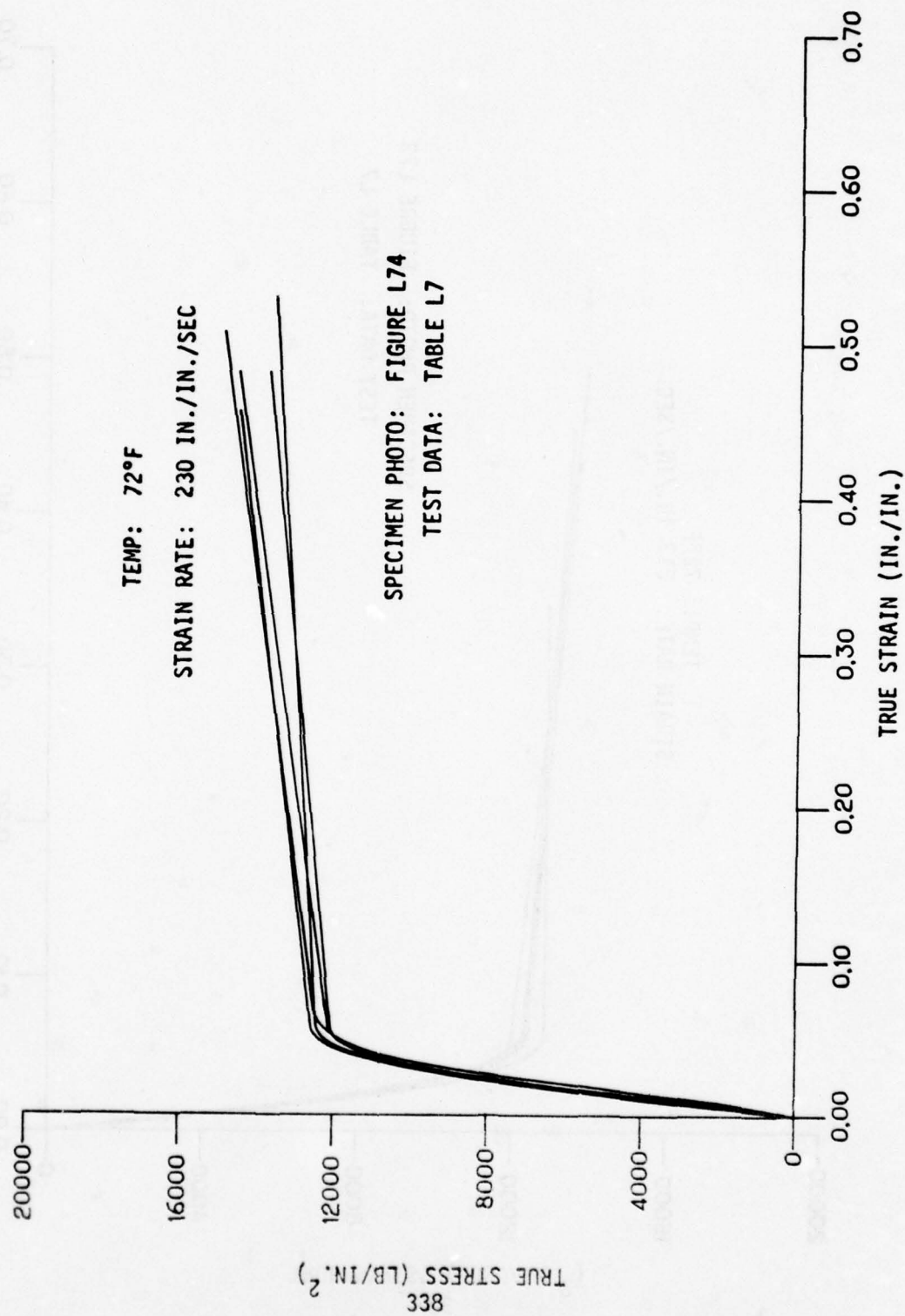


Figure L59. Tensile Test Curves (TEX601 - 0.20 Polycarbonate).

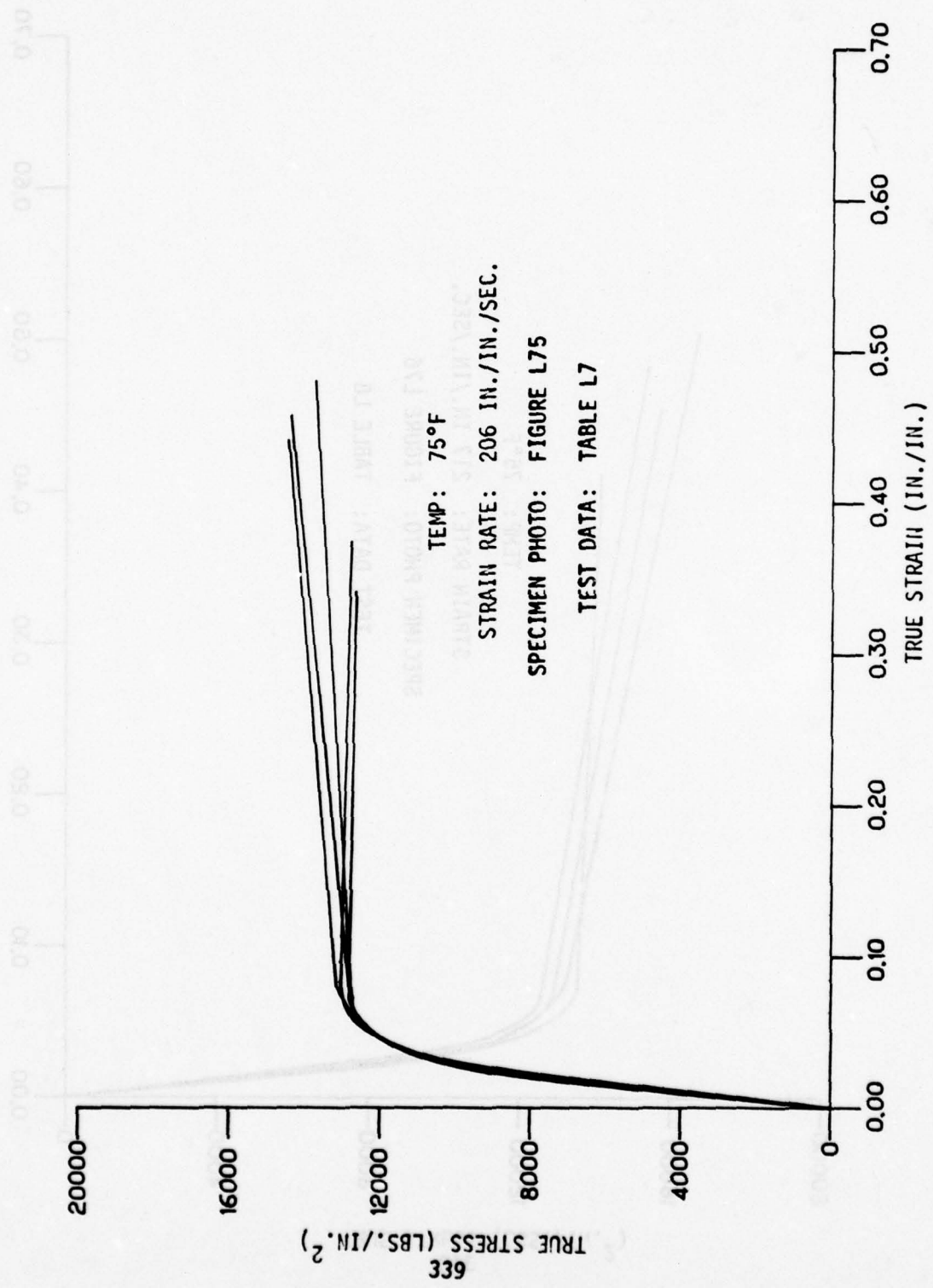


Figure L60. Tensile Test Curves (TEX601 - 0.20 Polycarbonate)

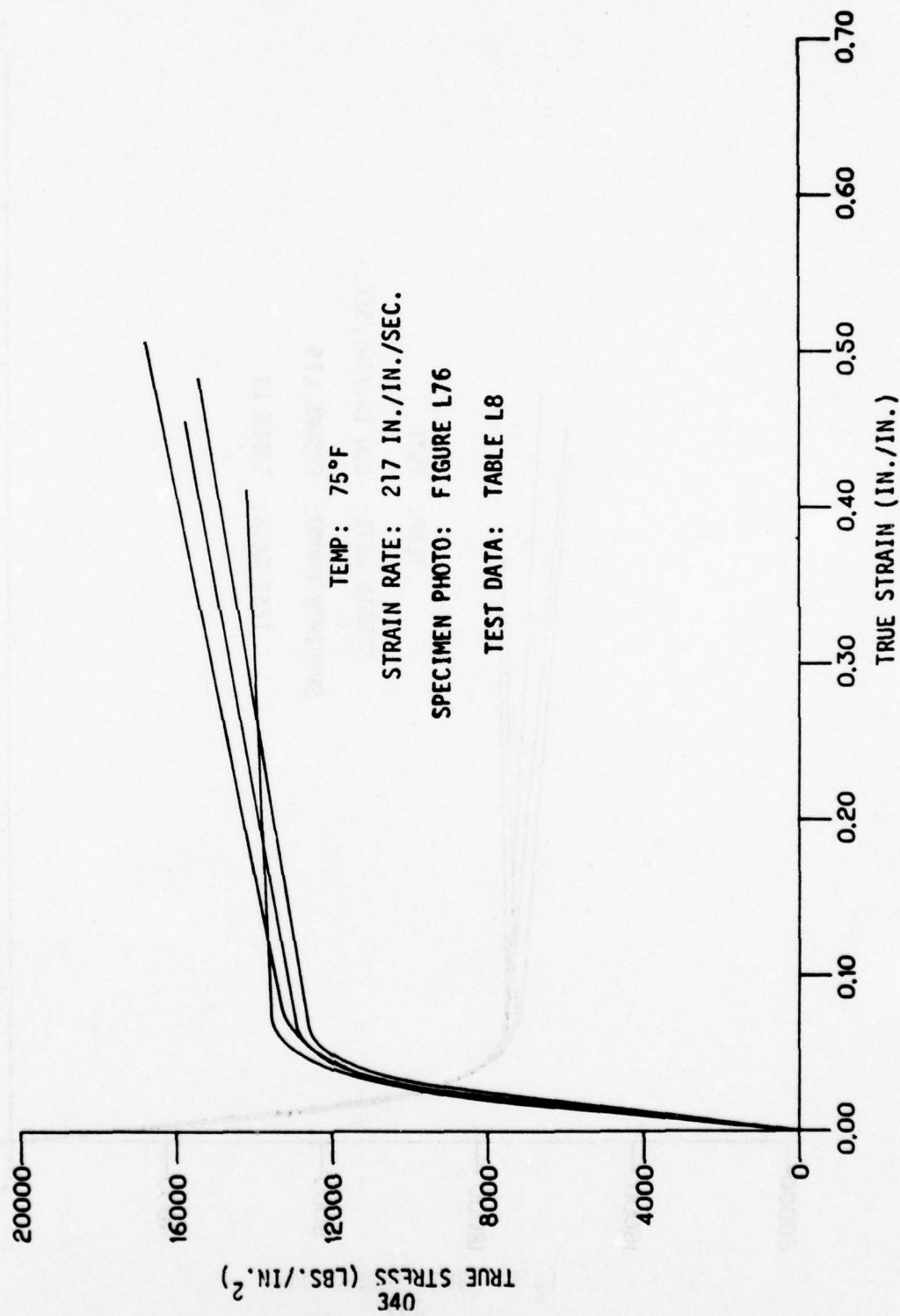


Figure L61. Tensile Test Curves (TEX 601 - 0.20 Polycarbonate)

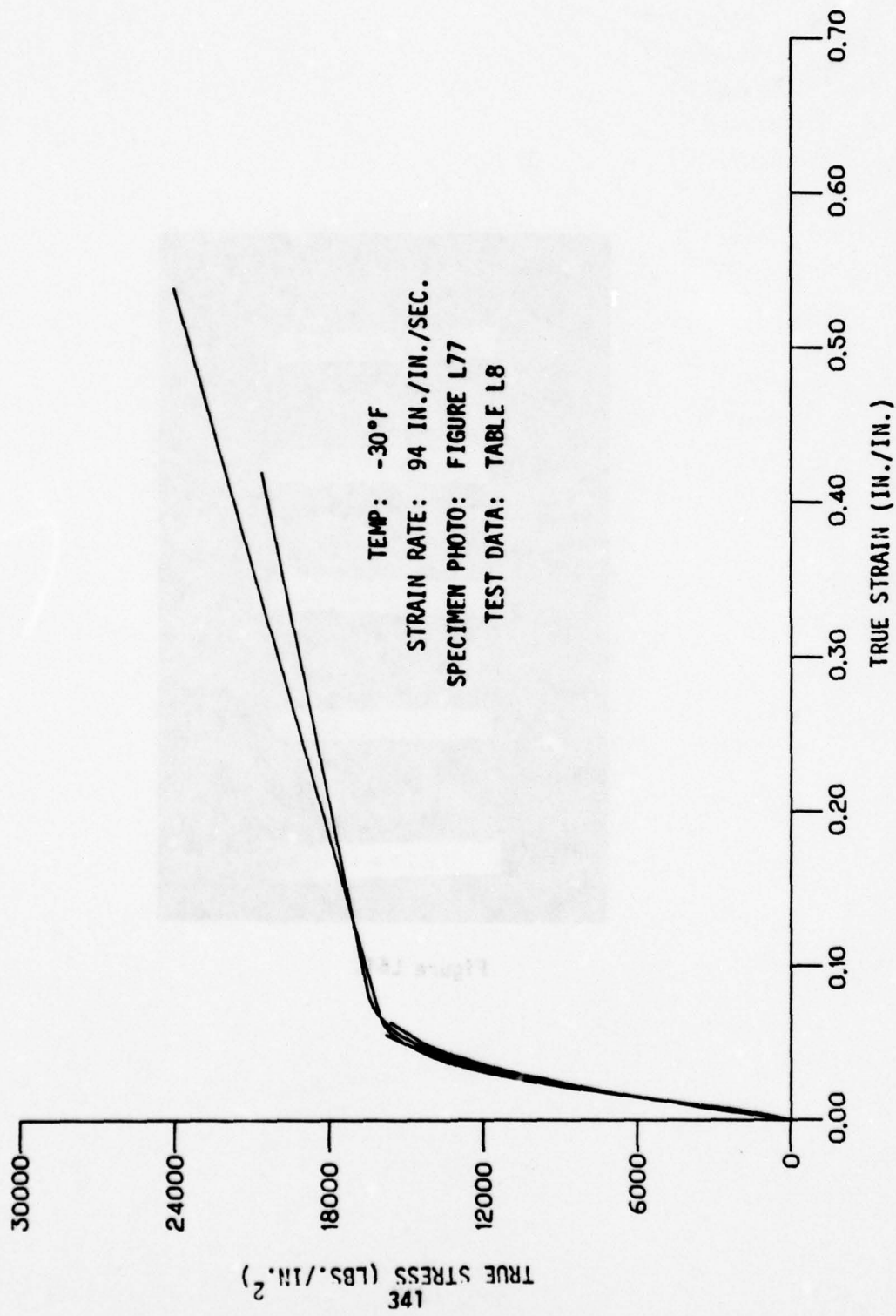


Figure L62. Tensile Test Curves (TEX601 - 0.20 Polycarbonate)

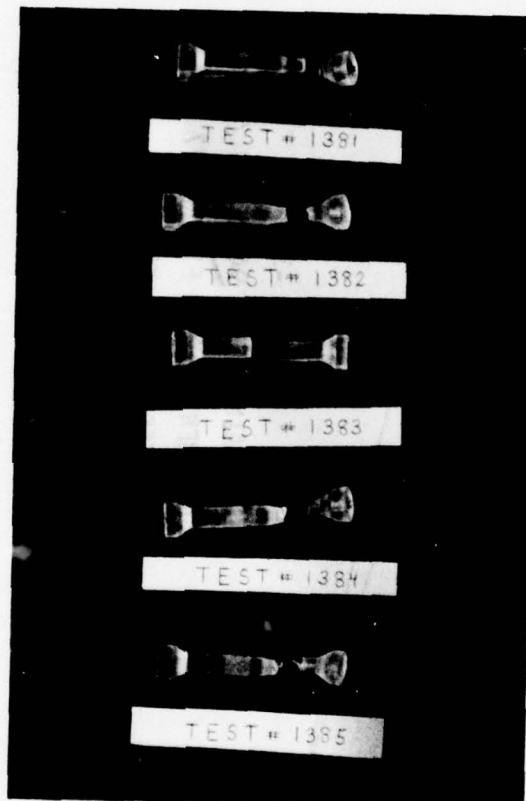


Figure L64.

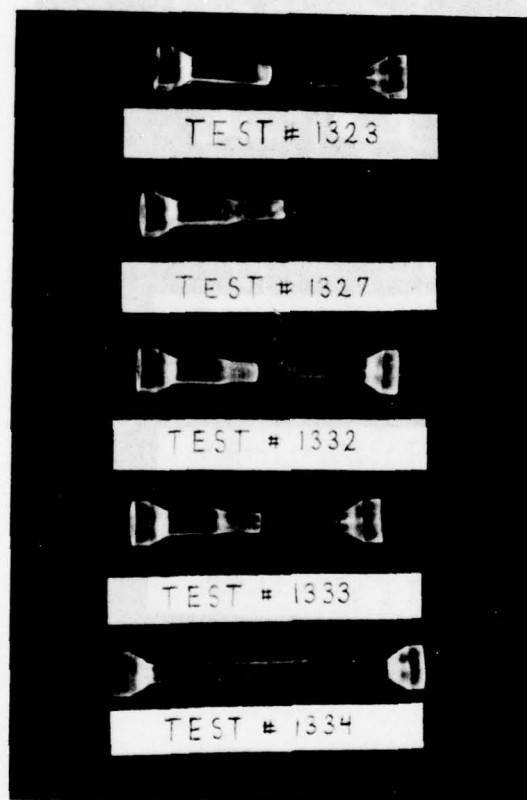


Figure L65.

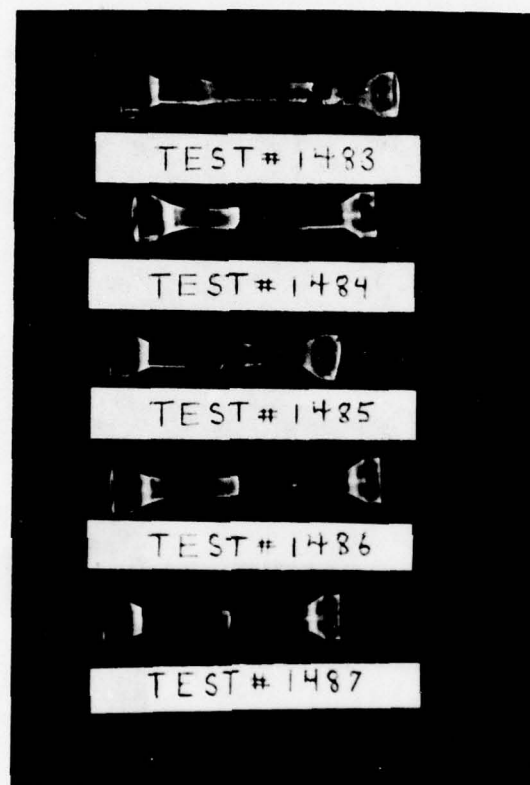


Figure L66.

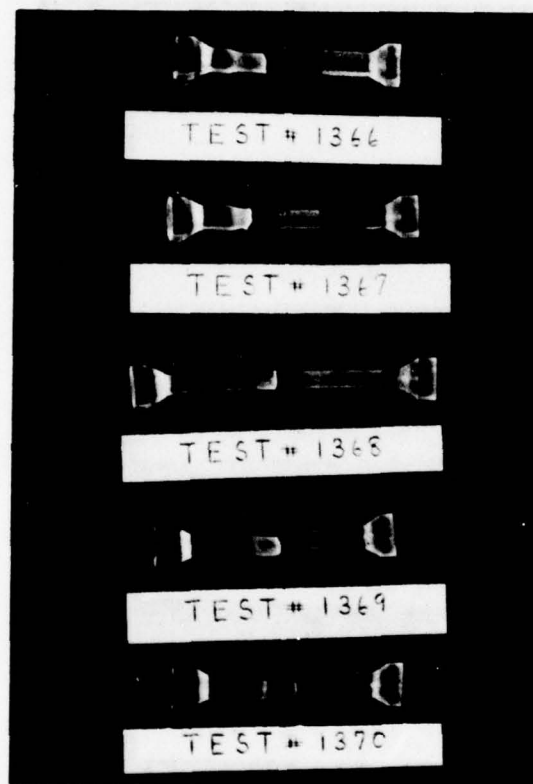


Figure L67.

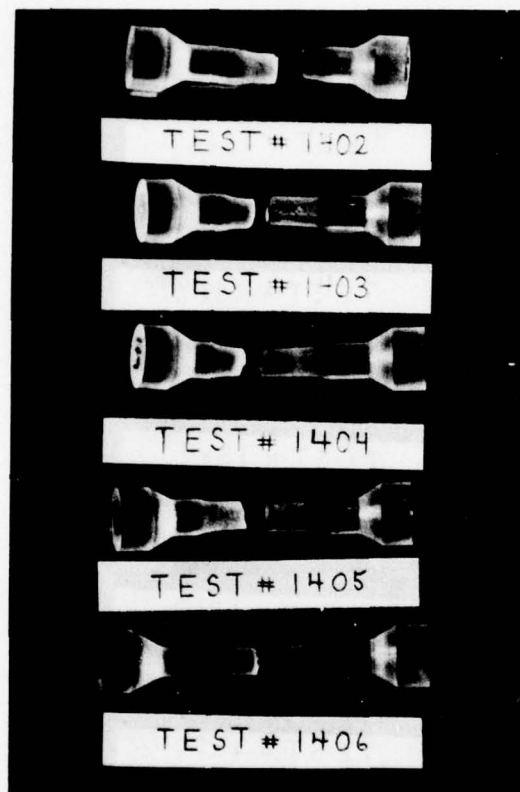


Figure L68.

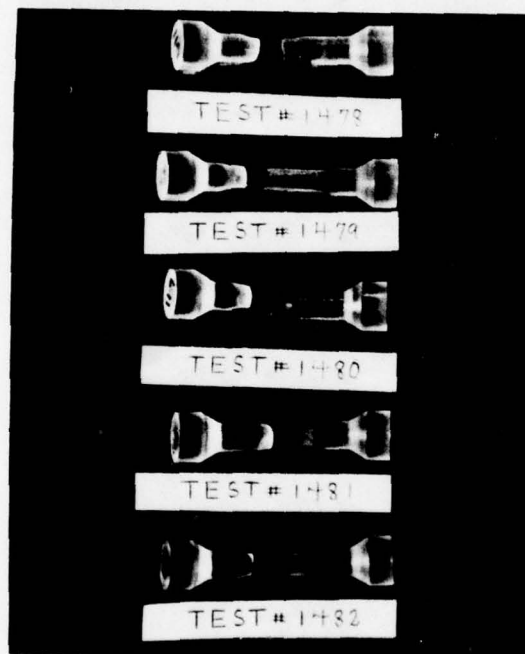


Figure L69.

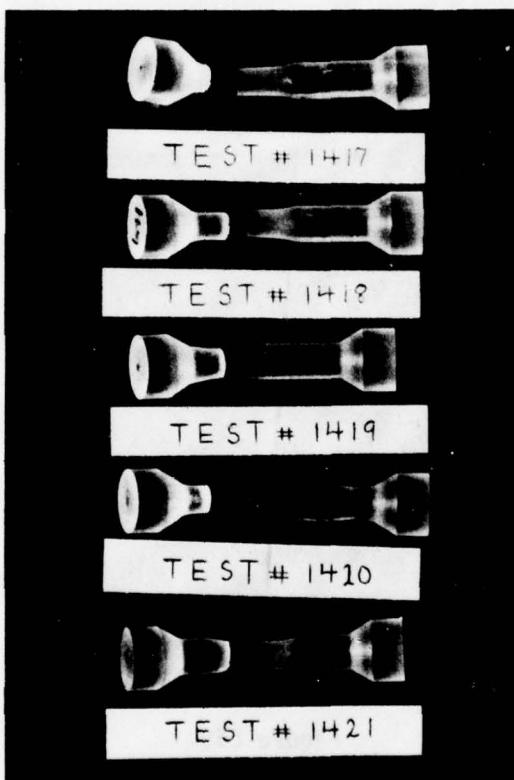


Figure L70.

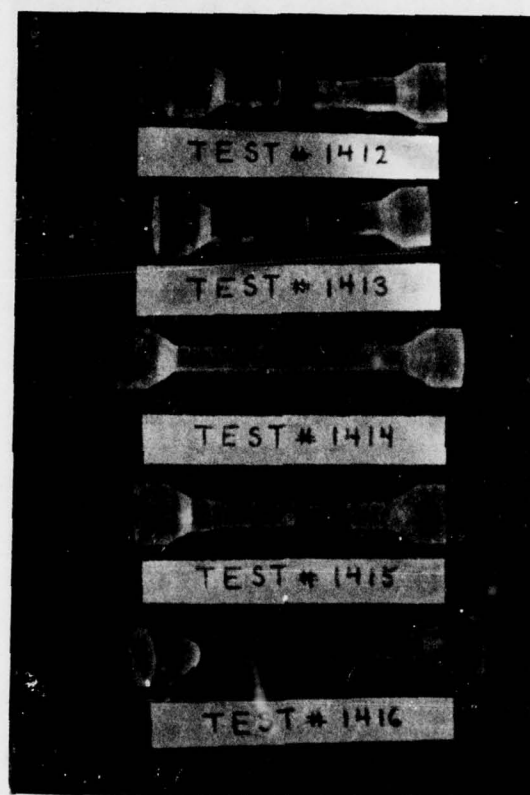


Figure L71.

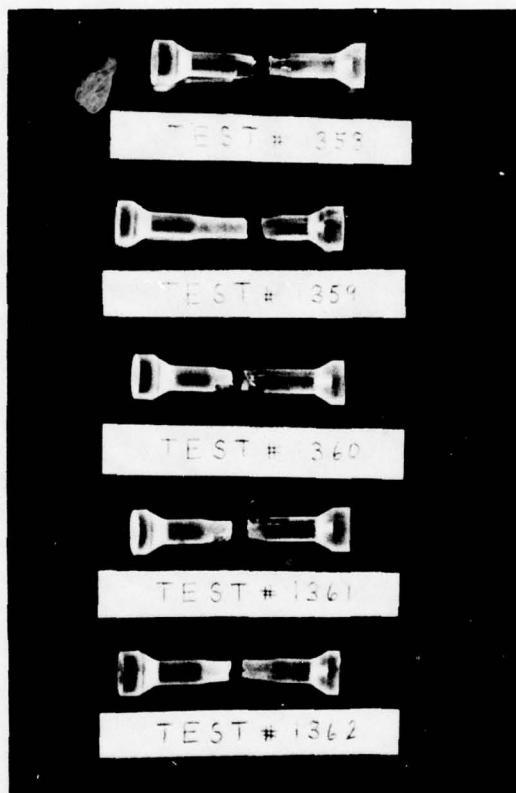


Figure L72.

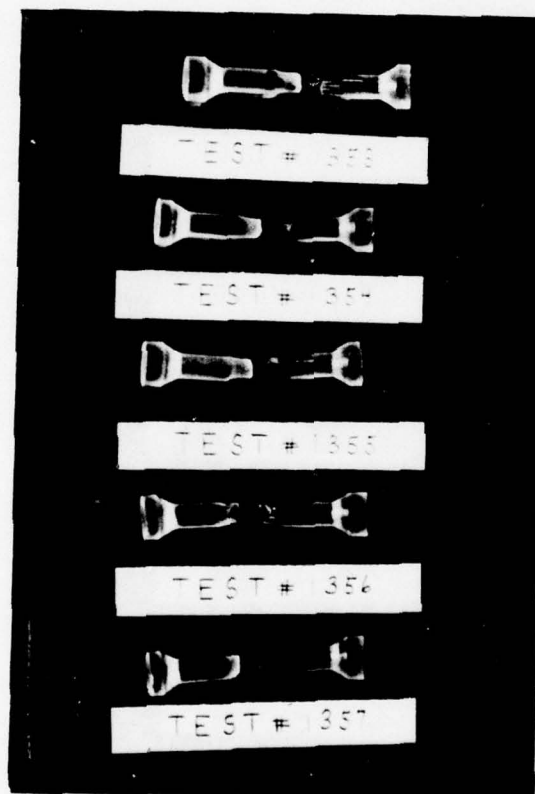


Figure L73.

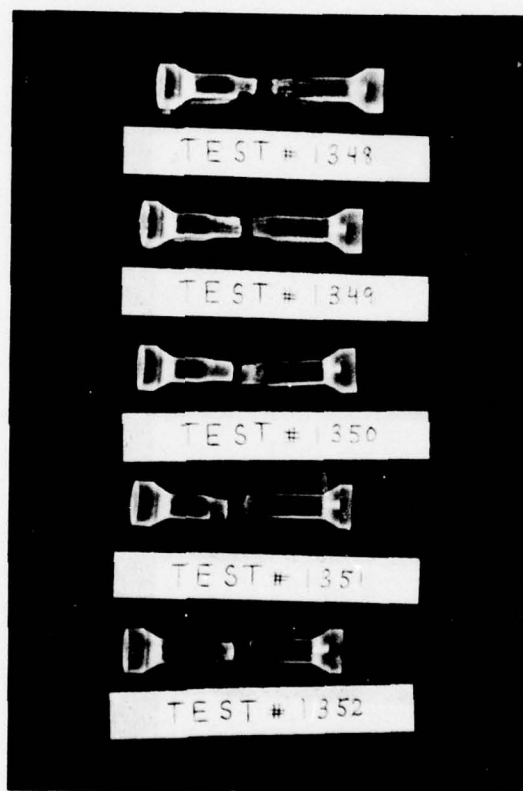


Figure L74.

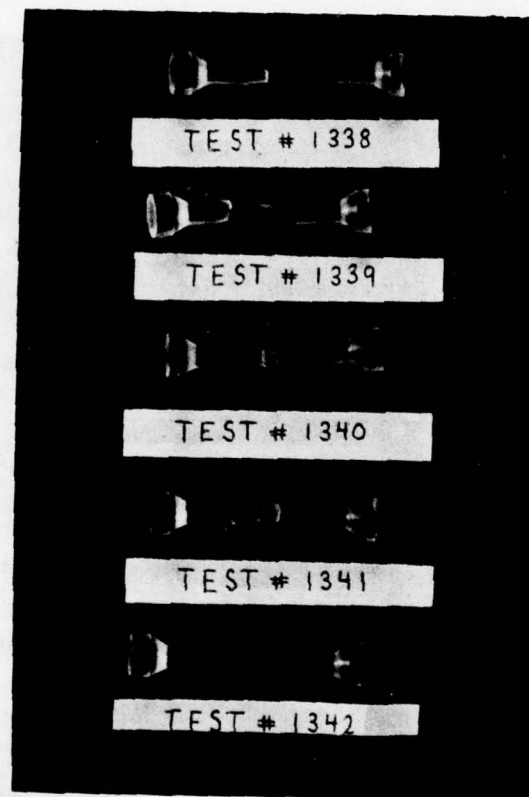


Figure L75.

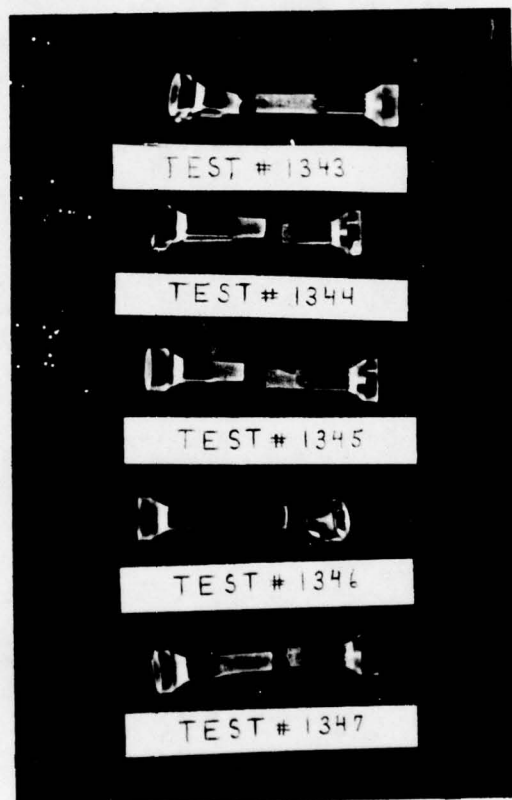


Figure L76.

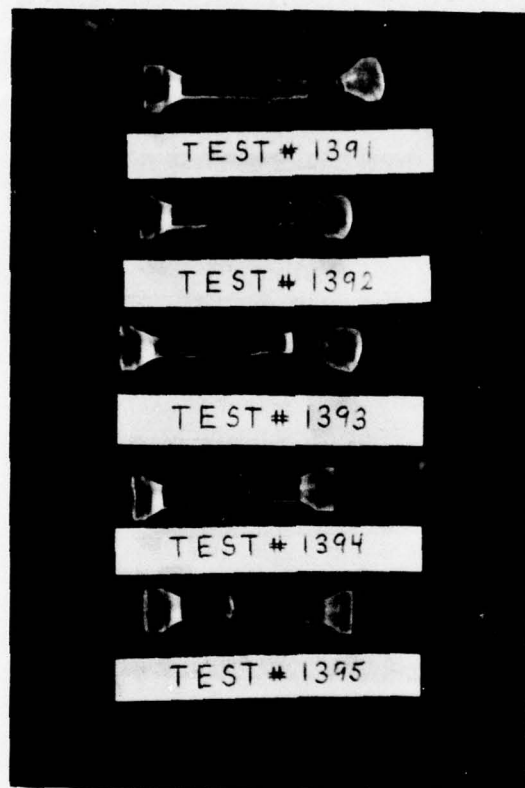


Figure L77.

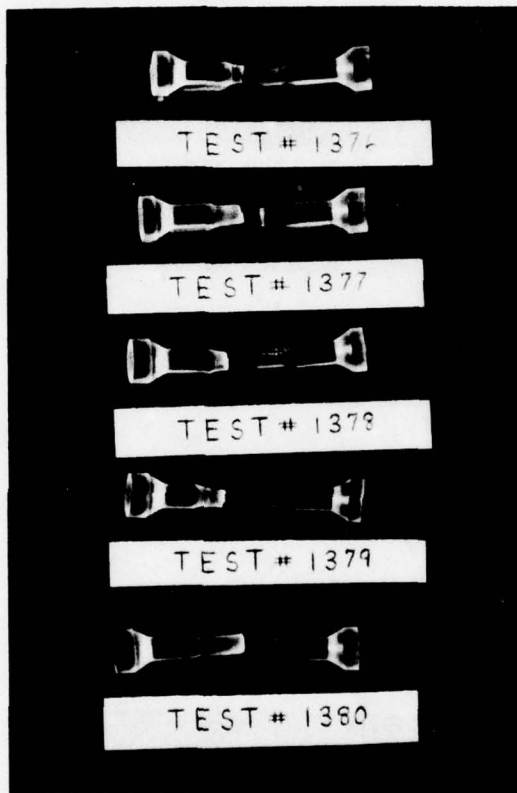


Figure L78.

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ex clst(stsstr) 'd1(sk60181) 1(tekst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 ****
TEKSST,CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES,2=NO)
?
1
INPUT NUMBER TO BE DISCARDED & POSITION NUMBERS ONE AT A TIME
?
1
?
3
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SK601-1381 23682. 0.599
2 SK601-1382 19685. 0.538
3 SK601-1384 22201. 0.598
AVG STD DEV A B C
FRACTURE STRAINS = 0.578 0.035 0.206 0.361 0.444
FRACTURE STRESSES = 21856.003 2020.715 531.397 9418.502 14165.161
ORIGINAL CURVES TRUNCATED AT 0.068 STRAIN
BASE CURVE IS 3 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AVG STD DEV A B C
YIELD STRESS = 15192.643 307.211 11950.645 13301.759 14023.398
SECAVT TO YIELD STRESS = 222975.287 175394. 195224. 205315.
AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.013 350396. 0.013 -3158. 0.013 144187. 0.013 222884.
4 0.025 355202. 0.025 96484. 0.025 204305. 0.025 261893.
6 0.036 332844. 0.036 236351. 0.036 276564. 0.036 298043.
8 0.050 286599. 0.050 281114. 0.050 283400. 0.050 284621.
STRAIN AT 2ND PT ON BASE CURVE= 0.008
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.008 39842. 367167. -32899. 133830. 222881.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 366494.
WARNING-MAX SLOPE(E) = 392673. AT STRAIN= 0.013
AREA UNDER AVERAGE DESIGN CURVE= 16131.456

```

Figure L79. Computer Run - SK601.

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ex cist(stsstr) 'al(sk60132) g(e77623.00211.feg015) l(teksst)'
**** LOAD MODULE RELOCATION FACTOR = JAF1E0 ****
TEKSST,CHG 12A,10-19-77; J.F.BURAE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
A-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SK601-1332 16759. 0.546
2 SK601-1333 15342. 0.571
3 SK601-1334 19392. 0.677
AVG STD DEV A B C
FRACTURE STRAINS = J.599 J.869 -3.134 0.171 3.334
FRACTURE STRESSES = 17830.999 1785.360 -1009.906 6842.107 11335.918
ORIGINAL CURVES TRUNCATED AT J.063 STRAIN
BASE CURVE IS 1 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AVG STD DEV A B C
YIELD STRESS = 12133.223 114.424 10925.713 11428.945 11697.727
SECANT TO YIELD STRESS = 191315.412 172275. 189210. 154449.
AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 J.013 339319. 0.013 303320. 0.013 312322. J.013 319590.
4 J.023 339735. 0.023 325339. 0.023 331339. 0.023 334543.
6 0.036 293725. 0.036 257692. 0.036 274793. J.036 283926.
8 0.053 226642. 0.053 212153. J.053 210190. J.053 221415.
STRAIN AT 2ND PT ON BASE CURVE= J.004
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.008 3071. 840837. 379177. 352616. 354334.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 340802.
WARNING-MAX SLOPE(E)= 35362. AT STRAIN= J.015
AREA UNDER AVERAGE DESIGN CURVE= 3545.392

```

Figure L80. Computer Run - SK601.

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?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SK601-1483 17797. 0.634
2 SK601-1484 13451. 0.361
3 SK601-1485 15154. 0.497
4 SK601-1487 14262. 0.426
AVG STD DEV A B C
FRACTURE STRAINS = 0.480 0.117 -0.346 -0.008 0.173
FRACTURE STRESSES = 15165.999 1886.861 1878.726 7312.885 10226.198
ORIGINAL CURVES TRUNCATED AT 0.062 STRAIN
BASE CURVE IS 3 OF CURVES USED.
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0207 7315. 0.3810 0.3939
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0207 7315. 0.3810 0.3939
NOT NORMAL STRAIN SSTRESS DCRIT DCAC
0.0207 7315. 0.3810 0.3939
0.0216 7506. 0.3810 0.4309
0.0225 7731. 0.3810 0.4244
0.0236 8017. 0.3810 0.3848
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AVG STD DEV A B C
YIELD STRESS = 11387.363 121.745 10530.036 10880.661 11068.635
SECANT TO YIELD STRESS = 183460.012 169648. 175297. 178325.
AVG A B C
FC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.005 445490. 0.005 251316. 0.005 331137. 0.005 373930.
4 0.015 375769. 0.015 338936. 0.015 354000. 0.015 362076.
6 0.021 355932. 0.021 297292. 0.021 321274. 0.021 334132.
8 0.041 256849. 0.041 246804. 0.041 250912. 0.041 253115.
STRAIN AT 2ND PT ON BASE CURVE = 0.005
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.005 30302. 391110. 517251. 465663. 438005.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES = 391850.
AREA UNDER AVERAGE DESIGN CURVE = 6047.569

Figure L81. Computer Run - SK601.

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ex clst(stsstr) 'dl(sk60166) 1(teksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 *****
TEKSST.CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS-   END POINT STRESS   STRAIN
1 SK601-1366      11027.    0.529
2 SK601-1367      10685.    0.514
3 SK601-1368      14021.    0.600
4 SK601-1369      11324.    0.524
5 SK601-1370      10617.    0.507
STRAIN AT FRACTURE POINT IS NOT NORMAL
          AVG   STD DEV          A          B          C
NOT NORMAL  STRAIN  SSTRESS  DCRIT  DCAC
          0.5285  11324.  0.3370  0.3591
FRACTURE STRAINS      = 0.551  0.073  0.134  0.303  0.395
FRACTURE STRESSES     = 11534.800 1418.450 3391.477 6702.140 8485.132
ORIGINAL CURVES TRUNCATED AT 0.060 STRAIN
BASE CURVE IS 2 OF CURVES USED.
NOT NORMAL  STRAIN  SSTRESS  DCRIT  DCAC
          0.0283  7993.  0.3370  0.3383
          0.0293  8208.  0.3370  0.3489
          0.0304  8418.  0.3370  0.3577
          0.0316  8629.  0.3370  0.3622
          0.0328  8843.  0.3370  0.3598
          0.0342  9061.  0.3370  0.3494
NOT NORMAL  STRAIN  SSTRESS  DCRIT  DCAC
          0.0342  9061.  0.3370  0.3494
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
          AVG   STD DEV          A          B          C
YIELD STRESS      = 10402.086 322.112 8552.839 9304.649 9709.545
SECANT TO YIELD STRESS =174032.318 143093. 155672. 162446.
          AVG          A          B          C
PC NO.  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC  STRAIN  SEC
2 0.014 292132. 0.014 132991. 0.014 197690. 0.014 232534.
4 0.027 286840. 0.027 191203. 0.027 230084. 0.027 251024.
6 0.044 230414. 0.044 191958. 0.044 207592. 0.044 216012.
8 0.052 199813. 0.052 162806. 0.052 177851. 0.052 185954.
STRAIN AT 2ND PT ON BASE CURVE= 0.008
          STRAIN  STD DEV          AVG          A          B          C
ELASTIC MODULUS AT 0.008 21388. 290056. 175428. 222030. 247128.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 290444.
WARNING-MAX SLOPE(E)= 305116. AT STRAIN= 0.016
AREA UNDER AVERAGE DESIGN CURVE= 5810.195

```

Figure L82. Computer Run - SK601.

THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES

?

1

DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)

?

2

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

?

.01 1000

TEST SPECIMENS- END POINT STRESS STRAIN

1	SK611-1402	15931.	0.436
2	SK611-1403	17557.	0.472
3	SK611-1404	18156.	0.532
4	SK611-1405	17339.	0.527
5	SK611-1406	19607.	0.600

	AVG	STD DEV	A	B	C
FRACTURE STRAINS	= 0.514	0.063	0.153	0.299	0.373

FRACTURE STRESSES	= 17717.998	1334.511	10056.570	13171.319	14849.800
-------------------	-------------	----------	-----------	-----------	-----------

ORIGINAL CURVES TRUNCATED AT 0.063 STRAIN

BASE CURVE IS 2 OF CURVES USED.

NOT NORMAL STRAIN STRESS DCRT DCAC

0.0583	13786.	0.3370	0.3689
--------	--------	--------	--------

NOT NORMAL STRAIN STRESS DCRT DCAC

0.0583	13786.	0.3370	0.3689
--------	--------	--------	--------

0.0591	13803.	0.3370	0.3763
--------	--------	--------	--------

0.0598	13812.	0.3370	0.3500
--------	--------	--------	--------

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

	AVG	STD DEV	A	B	C
YIELD STRESS	= 13837.434	69.494	13438.468	13600.667	13633.022

SECANT TO YIELD STRESS	= 219895.622		213556.	216134.	217522.
------------------------	--------------	--	---------	---------	---------

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC

2	0.010	405036.	0.010	341013.	0.010	367042.	0.010	331060.
4	0.021	373403.	0.021	334300.	0.021	352230.	0.021	351887.
6	0.029	349524.	0.029	312262.	0.029	327411.	0.029	335569.
8	0.039	314217.	0.039	291040.	0.039	300463.	0.039	305537.

STRAIN AT 2ND PT ON BASE CURVE= 0.005

	STRAIN	STD DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.005	15262.	411099.	376587.	390618.	398174.	

CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 411089.

WARNING-MAX SLOPE(E)= 412904. AT STRAIN= 0.006

AREA UNDER AVERAGE DESIGN CURVE= 7701.317

Figure L83. Computer Run - SK611.

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```

x:=lst.stastr) 'dl(sk61178) g(a77623.d6211.fag002) ((takest)'
*** LOAD MODULE RELOCATION FACTOR = 0AF540 221222222
TEK55T,CMG 120, 3-07-78, J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?

DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?

X-SCALE Y-SCALE TO CORRECT GERRER DIGITISED DATA
?

1 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SK611-1478 13240. 0.408
2 SK611-1479 15939. 0.531
3 SK611-1480 15084. 0.498
4 SK611-1481 14280. 0.427
5 SK611-1482 15083. 0.463
      AVG STD DEV A B C
FRACTURE STRAINS = 0.465 0.050 0.176 0.294 0.357
FRACTURE STRESSES = 14713.160 1011.658 8906.242 11268.448 12538.000
ORIGINAL CURVES TRUNCATED AT 0.072 STRAIN
BASE CURVE IS 1 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
      AVG STD DEV A B C
YIELD STRESS = 12286.925 341.135 10328.470 11124.670 11553.485
SECANT TO YIELD STRESS = 169920.127 142236. 153847. 159777.
      AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.009 413169. 0.009 221765. 0.009 299580. 0.009 341488.
4 0.022 359622. 0.022 288048. 0.022 317147. 0.022 332818.
6 0.037 290169. 0.037 228015. 0.037 253284. 0.037 266893.
8 0.044 263800. 0.044 219396. 0.044 237448. 0.044 247170.
STRAIN AT 2ND PT ON BASE CURVE = 0.004
      STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.004 32633. 408380. 287650. 336733. 363167.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES = 408862.
AREA UNDER AVERAGE DESIGN CURVE = 5062.600

```

Figure L84. Computer Run - SK611.

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TEST SPECIMENS-	END POINT STRESS	STRAIN
1 SK611-1417	30082.	0.605
2 SK611-1418	31586.	0.624
3 SK611-1419	23526.	0.415
4 SK611-1420	30003.	0.592
5 SK611-1421	25868.	0.472

	AVG	STD DEV	A	B	C
FRACTURE STPAIRS	= 0.542	0.092	0.012	0.227	0.343
FRACTURE STPASSES	= 29410.062	3530.913	9140.565	16381.482	20810.714

ORIGINAL CURVES TRUNCATED AT 0.074 STRAIN
BASE CURVE IS 5 OF CURVES USED.

NOT NORMAL	STRAIN	STRESS	DCPIT	DCAC
0.0018	725.	0.3370	0.3836	
0.0027	1091.	0.3370	0.4241	
0.0036	1446.	0.3370	0.4150	
0.0044	1786.	0.3370	0.3703	

NOT NORMAL	STRAIN	STRESS	DCPIT	DCAC
0.0516	18768.	0.3370	0.3383	
0.0524	18865.	0.3370	0.3574	

NOT NORMAL	STRAIN	STRESS	DCPIT	DCAC
0.0524	18865.	0.3370	0.3574	
0.0531	18943.	0.3370	0.3720	
0.0538	19018.	0.3370	0.3864	
0.0545	19097.	0.3370	0.3965	
0.0553	19224.	0.3370	0.3786	
0.0561	19340.	0.3370	0.3618	
0.0570	19460.	0.3370	0.3462	

NOT NORMAL	STRAIN	STRESS	DCPIT	DCAC
0.0570	19460.	0.3370	0.3462	

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

	AVG	STD DEV	A	B	C
YIELD STRESS	= 20324.296	1041.673	14344.054	16775.317	18084.700
SECANT TO YIELD STRESS	= 274745.466		193004.	226770.	280470.

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.010	436608.	0.010	284057.	0.010	346113.	0.010	370534.
4	0.020	440667.	0.020	286378.	0.020	352763.	0.020	388515.
6	0.030	436711.	0.030	327213.	0.030	371720.	0.030	395704.
8	0.030	411072.	0.030	330702.	0.030	363376.	0.030	380073.

STRAIN AT 2ND PT ON BASE CURVE= 0.005

	STRAIN	STD DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.005	29481.		441166.	308340.	362346.	391426.

CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 440826.

WARNING-SLOPE(E)= 442425. AT STRAIN= 0.005
 WARNING-SLOPE(E)= 447507. AT STRAIN= 0.006
 WARNING-SLOPE(E)= 455465. AT STRAIN= 0.006
 WARNING-SLOPE(E)= 464438. AT STRAIN= 0.007
 WARNING-SLOPE(E)= 472296. AT STRAIN= 0.008
 WARNING-SLOPE(E)= 477443. AT STRAIN= 0.009
 WARNING-SLOPE(E)= 479141. AT STRAIN= 0.010
 WARNING-SLOPE(E)= 479066. AT STRAIN= 0.010
 WARNING-SLOPE(E)= 478712. AT STRAIN= 0.011
 WARNING-SLOPE(E)= 477950. AT STRAIN= 0.011
 WARNING-SLOPE(E)= 476656. AT STRAIN= 0.012
 WARNING-SLOPE(E)= 474809. AT STRAIN= 0.013
 WARNING-SLOPE(E)= 472556. AT STRAIN= 0.013
 WARNING-SLOPE(E)= 466614. AT STRAIN= 0.015
 WARNING-SLOPE(E)= 466220. AT STRAIN= 0.015
 WARNING-SLOPE(E)= 464623. AT STRAIN= 0.015
 WARNING-SLOPE(E)= 461887. AT STRAIN= 0.016

WARNING-SLOPE(E)= 458274. AT STRAIN= 0.017
 WARNING-SLOPE(E)= 454140. AT STRAIN= 0.017
 WARNING-SLOPE(E)= 449917. AT STRAIN= 0.018
 AREA UNDER AVERAGE DESIGN CURVE= 12390.277

Figure L85. Computer Run - SK611.

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```

*ex elst(stsstr) 'd1(sk61112) g(e77623.d0211.feg004) l(tekst)'
TEKST,CHG 12,10-10-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GEPBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SK611-1412 12504. 0.523
2 SK611-1413 11906. 0.537
3 SK611-1414 15710. 0.745
4 SK611-1415 14704. 0.619
      AVG STD DEV      A      B      C
FRACTURE STRESS = 0.606 0.102 -0.112 0.191 0.330
FRACTURE STRESS = 13753.275 1709.416 1099.926 6269.266 9945.621
ORIGINAL CURVES TRUNCATED AT 0.061 STRAIN
BASE CURVE IS 3 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
      AVG STD DEV      A      B      C
YIELD STRESS = 11057.634 49.557 11615.605 11755.540 11930.512
SECANT TO YIELD STRESS = 104005.272 190332. 101611. 102833.
      AVG      A      B      C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.011 354871. 0.011 238174. 0.011 285000. 0.011 311487.
4 0.021 328080. 0.021 280710. 0.021 300451. 0.021 311035.
6 0.031 290168. 0.031 273632. 0.031 284076. 0.031 289674.
8 0.042 263104. 0.042 244026. 0.042 252360. 0.042 256346.
STRAIN AT 2ND PT ON BASE CURVE = 0.005
      STRAIN STD DEV      AVG      A      B      C
ELASTIC MODULUS AT 0.005 15716. 350230. 247523. 203208. 317701.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES = 350106.
AREA UNDER AVERAGE DESIGN CURVE = 7496.087

```

Figure L86. Computer Run - SK611.

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```

ex clst(stsstr) 'd1(tex60158) 1(teksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 *****
TEKST,CNG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 TEX601-1358 13527. 0.353
2 TEX601-1359 14505. 0.435
3 TLX601-1359 14128. 0.387
4 TEX601-1361 13087. 0.408
5 TLX601-1362 14128. 0.387
AVG STD DEV A B C
FRACTURE STRAINS = 0.394 0.030 0.220 0.291 0.329
FRACTURE STRESSES = 13875.000 562.798 10643.977 11957.547 12664.984
ORIGINAL CURVLS TRUNCATED AT 0.061 STRAIN
BASE CURVE IS 2 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AVG STD DEV A B C
YIELD STRESS = 12642.919 360.146 10575.322 11415.902 11868.606
SECANT TO YIELD STRESS =208151.582 174111. 187950. 195403.
AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.010 395695. 0.010 344122. 0.010 365089. 0.010 376381.
4 0.020 366780. 0.020 328708. 0.020 344186. 0.020 352522.
6 0.035 303056. 0.035 271713. 0.035 284455. 0.035 291318.
8 0.056 223803. 0.056 190241. 0.056 203886. 0.056 211234.
STRAIN AT 2ND PT ON BASE CURVE= 0.005
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.005 12203. 404018. 331290. 360857. 376781.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 403842.
WARNING-MAX SLOPE(E)= 404765. AT STRAIN= 0.006
AREA UNDER AVERAGE DESIGN CURVE= 4939.904

```

Figure L87. Computer Run - TEX601.

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```

ex clst(stsstr) 'd1(tex60153) 1(teksst)'
TEKSST,CHG 12A,10-19-77; J.P.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 TEX601-1353 13559. 0.454
2 TEX601-1354 13565. 0.420
3 TEX601-1355 13925. 0.492
4 TEX601-1356 13744. 0.433
5 TEX601-1357 12932. 0.341
AVG STD DEV A B C
FRACTURE STRAINS = 0.428 0.056 0.107 0.237 0.308
FRACTURE STRESSES = 13545.000 374.288 11396.213 12269.801 12740.281
ORIGINAL CURVES TRUNCATED AT 0.065 STRAIN
BASE CURVE IS 4 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AVG STD DEV A B C
YIELD STRESS = 12413.293 296.999 10708.219 11401.416 11774.744
SECANT TO YIELD STRESS = 190277.036 164141. 174766. 180489.
AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.011 369209. 0.011 222501. 0.011 282145. 0.011 314267.
4 0.024 336237. 0.024 242858. 0.024 280821. 0.024 301267.
6 0.041 276119. 0.041 232730. 0.041 250369. 0.041 259869.
8 0.065 190277. 0.065 164141. 0.065 174766. 0.065 180489.
STRAIN AT 2ND PT ON BASE CURVE= 0.006
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.006 31643. 371257. 224730. 284361. 316383.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 370868.
AREA UNDER AVERAGE DESIGN CURVE= 5271.000

```

Figure L88. Computer Run - TEX601.

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```

ex clst(stsstr) 'd1(tex60148) 1(teksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 *****
TEKSST,CRC 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 TEX601-1348 13738. 0.451
2 TEX601-1349 14929. 0.506
3 TEX601-1350 13592. 0.530
4 TEX601-1351 14533. 0.481
5 TEX601-1352 14509. 0.455
AVG STD DEV A L C
FRACTURE STRAINS = 0.490 0.029 0.326 0.393 0.429
FRACTURE STRESSES = 14260.200 570.701 10963.605 12315.621 13033.193
ORIGINAL CURVES TRUNCATED AT 0.065 STRAIN
BASE CURVE IS 2 OF CURVES USED.
NOT NORMAL STRAIN SSTRESS DCRT DCRC
0.0519 12031. 0.3370 0.3405
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AVG STD DEV A L C
YIELD STRESS = 12366.004 218.790 11109.934 11620.506 11895.607
SLOPE TO YIELD STRESS = 169383.991 170597. 173430. 152661.
AVG A L C
10 NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.014 321472. 0.014 105061. 0.014 197109. 0.014 286682.
4 0.026 328211. 0.026 210111. 0.026 262872. 0.026 286979.
6 0.038 267164. 0.038 243855. 0.038 261462. 0.038 270545.
8 0.055 224351. 0.055 201657. 0.055 210683. 0.055 215652.
STRAIN AT 2ND PT ON BASE CURVE= 0.009
STRAIN STD DEV AVG A L C
ELASTIC MODULUS AT 0.009 36361. 355258. 160639. 239761. 262573.
CHECK ON CHG-MODULUS ON TEST CURVES= 353030.
TENSILE SLOPE(L)= 357056. AT STRAIN= 0.011
MAX UNDER AVERAGE DESIGN CURVE= 6216.448

```

Figure L89. Computer Run - TEX601.

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```

ex clst(stsstr) 'd1(tex60138) g(e77623.d0211.fag001) l(teksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 ****
TEKSST,CHG 12A,10-19-77; J.F.BURKE X37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 TEX601-1338 13738. 0.481
2 TEX601-1339 12773. 0.374
3 TEX601-1340 14449. 0.441
4 TEX601-1341 12642. 0.341
5 TEX601-1342 14384. 0.457
AVG STD DEV A B C
FRACTURE STRAINS = 0.419 0.059 0.081 0.219 0.292
FRACTURE STRESSES = 13597.200 859.674 8661.814 10668.292 11747.902
ORIGINAL CURVES TRUNCATED AT 0.081 STRAIN
BASE CURVE IS 5 OF CURVES USED.
NOT NORMAL STRAIN SSTRESS DCRIT JCAC
0.0465 12024. 0.3370 0.3435
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AVG STD DEV A B C
YIELD STRESS = 12915.119 168.50z 11947.751 12341.034 12552.840
SECANT TO YIELD STRESS = 159100.205 147183. 152028. 154637.
AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.012 380243. 0.012 185346. 0.012 264581. 0.012 307254.
4 0.021 376291. 0.021 239140. 0.021 294899. 0.021 324928.
6 0.034 320264. 0.034 293419. 0.034 304133. 0.034 310211.
8 0.057 220452. 0.057 211919. 0.057 215388. 0.057 217256.
STRAIN AT 2ND PT ON BASE CURVE= 0.006
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.006 29029. 375267. 210187. 277300. 313445.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 375468.
WARNING-MAX SLOPE(E)= 391080. AT STRAIN= 0.013
AREA UNDER AVERAGE DESIGN CURVE= 5267.754

```

Figure L90. Computer Run - TEX601.

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ex clst(stsstr) 'd1(tex60143) g(e77623.d0211.feg002) l(teksst)'

**** LOAD MODULE RELOCATION FACTOR = 0AF1EO *****

TEKSST,CHG 12A,10-19-77; J.F.BURKE X37544

THIS PROGRAM IS FOR TENSION TEST CURVES ONLY

ENTER NUMBER OF DATA FILES

?

1

DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)

?

1

INPUT NUMBER TO BE DISCARDED & POSITION NUMBERS ONE AT A TIME

?

1

?

4

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

?

.01 1000

TEST SPECIMENS- END POINT STRESS STRAIN

1	TEX601-1343	15766.	0.455
2	TEX601-1344	14181.	0.411
3	TEX601-1345	16777.	0.506
5	TEX601-1347	15417.	0.483

	AVG	STD DEV	A	B	C
FRACTURE STRAINS	= 0.464	0.041	0.177	0.294	0.357
FRACTURE STRESSES	= 15535.248	1071.315	7991.088	11076.435	12730.546

ORIGINAL CURVES TRUNCATED AT 0.081 STRAIN

BASE CURVE IS 3 OF CURVES USED.

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

	AVG	STD DEV	A	B	C
YIELD STRESS	= 13144.178	383.002	10447.081	11550.126	12141.480
SECANT TO YIELD STRESS	= 162601.012		129236.	142882.	150197.

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.009	354622.	0.009	111097.	0.009	210693.	0.009	264087.
4	0.022	359841.	0.022	129348.	0.022	223614.	0.022	274151.
6	0.033	321756.	0.033	241933.	0.033	274579.	0.033	292080.
8	0.057	223446.	0.057	181432.	0.057	198614.	0.057	207826.

STRAIN AT 2ND PT ON BASE CURVE= 0.003

	STRAIN	STD DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.003	36230.	353642.	100445.	203996.	259511.	

CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 353645.

WARNING-MAX SLOPE(E)= 376889. AT STRAIN= 0.015

AREA UNDER AVERAGE DESIGN CURVE= 6279.402

Figure L91. Computer Run - TEX601.

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```

2
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
2
1
INPUT NUMBER TO BE DISCARDED & POSITION NUMBERS ONE AT A TIME
2
3
2
2
2
4
2
5
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
2
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
10 1 TEX601-1391 23981. 0.539
12 3 TEX601-1393 20560. 0.420
13 5
FRACTURE STRAINS = 0.479 0.084 -2.640 -1.251 -3.510
FRACTURE STRESSES = 22270.500 2419.016-67460.473-27515.264 -6134.383
ORIGINAL CURVES TRUNCATED AT 0.031 STRAIN
BASE CURVE IS 2 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
AVG STD DEV A B C
YIELD STRESS = 16363.361 166.651 10131.591 12933.507 14403.039
SECANT TO YIELD STRESS = 200927.921 125021. 158812. 176257.
AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.010 335220. 0.010-238703. 0.010 55692. 0.010 196879.
4 0.021 388516. 0.021 332142. 0.021 357238. 0.021 370539.
6 0.035 347254. 0.035 112651. 0.035 217038. 0.035 272658.
8 0.053 235431. 0.053 121540. 0.053 194493. 0.053 233459.
STRAIN AT 2ND PT ON BASE CURVE= 0.005
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.005 10046. 380646. -19058. 158377. 253394.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 331162.
WARNING-MAX SLOPE(E)= 410953. AT STRAIN= 0.013
AREA UNDER AVERAGE DESIGN CURVE= 8616.613

```

Figure L92. Computer Run - TEX601.

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ex clst(stsstr) 'd1(tex60176) 1(teksst)'
**** LOAD MODULE RELOCATION FACTOR = 0AF1E0 ****
TERSET,CHG 12A,10-19-77; J.F.DURNE N37544
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
K-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 TEX601-1376 10237. 0.486
2 TEX601-1377 10654. 0.492
3 TEX601-1378 10411. 0.457
4 TEX601-1379 10957. 0.524
          AVG STD DEV      A      B      C
FRACTURE STRAINS = 0.490 0.027 0.297 0.376 0.418
FRACTURE STRESSES = 10564.750 312.455 8364.441 9264.311 9746.742
ORIGINAL CURVES TRUNCATED AT 0.052 STRAIN
BASE CURVE IS 1 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
          AVG STD DEV      A      B      C
YIELD STRESS = 10620.380 212.277 9126.025 9737.383 10065.139
SECANT TO YIELD STRESS =203664.118 174999. 186722. 193007.
          AVG      A      B      C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.008 326396. 0.008-180501. 0.008 26807. 0.008 137947.
4 0.020 330071. 0.020 41417. 0.020 159469. 0.020 222758.
6 0.034 283584. 0.034 192643. 0.034 229836. 0.034 249775.
8 0.052 203664. 0.052 174999. 0.052 186722. 0.052 193007.
STRAIN AT 2ND PT ON BASE CURVE= 0.008
          STRAIN STD DEV AVG      A      B      C
ELASTIC MODULUS AT 0.008 41476. 342062. 51886. 170561. 234164.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 341805.
WARNING-TEX SLOPE(E)= 342145. AT STRAIN= 0.010
AREA UNDER AVERAGE DESIGN CURVE= 5005.506

```

Figure L93. Computer Run - TEX601.

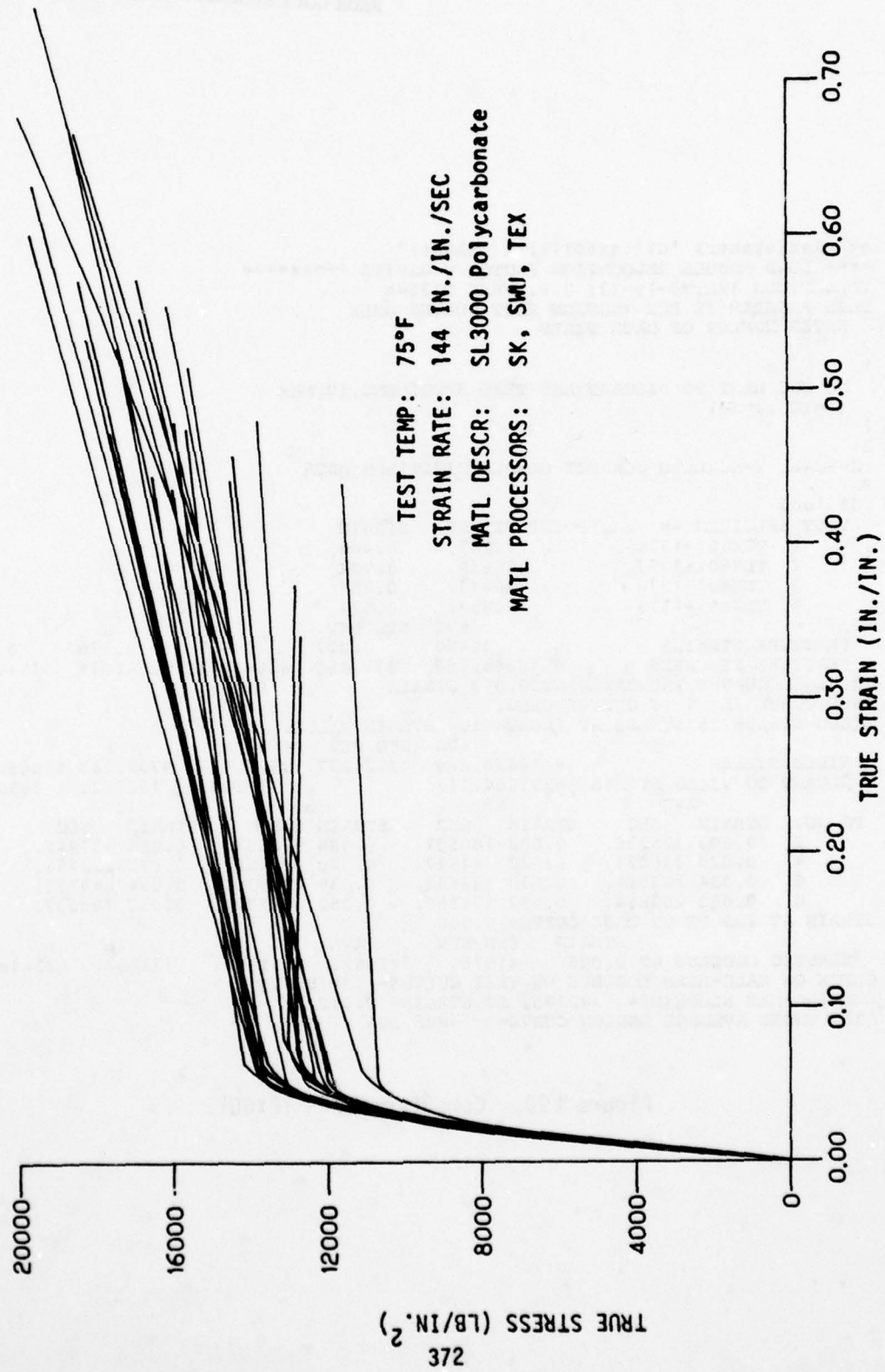


Figure L94. Tensile Test Curves.- Proposed Design Allowable.

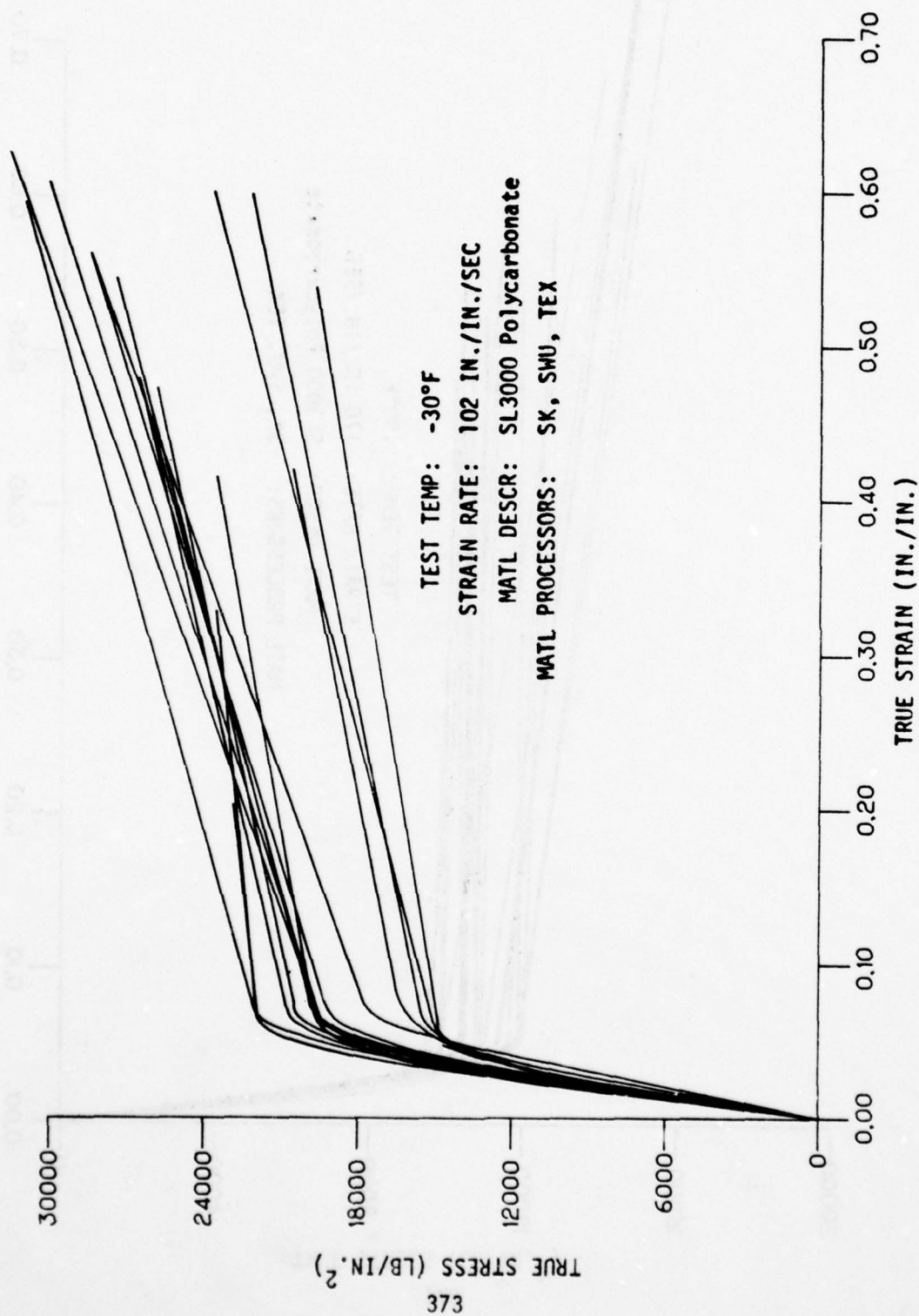


Figure L95. Tensile Test Curves. - Proposed Design Allowable.

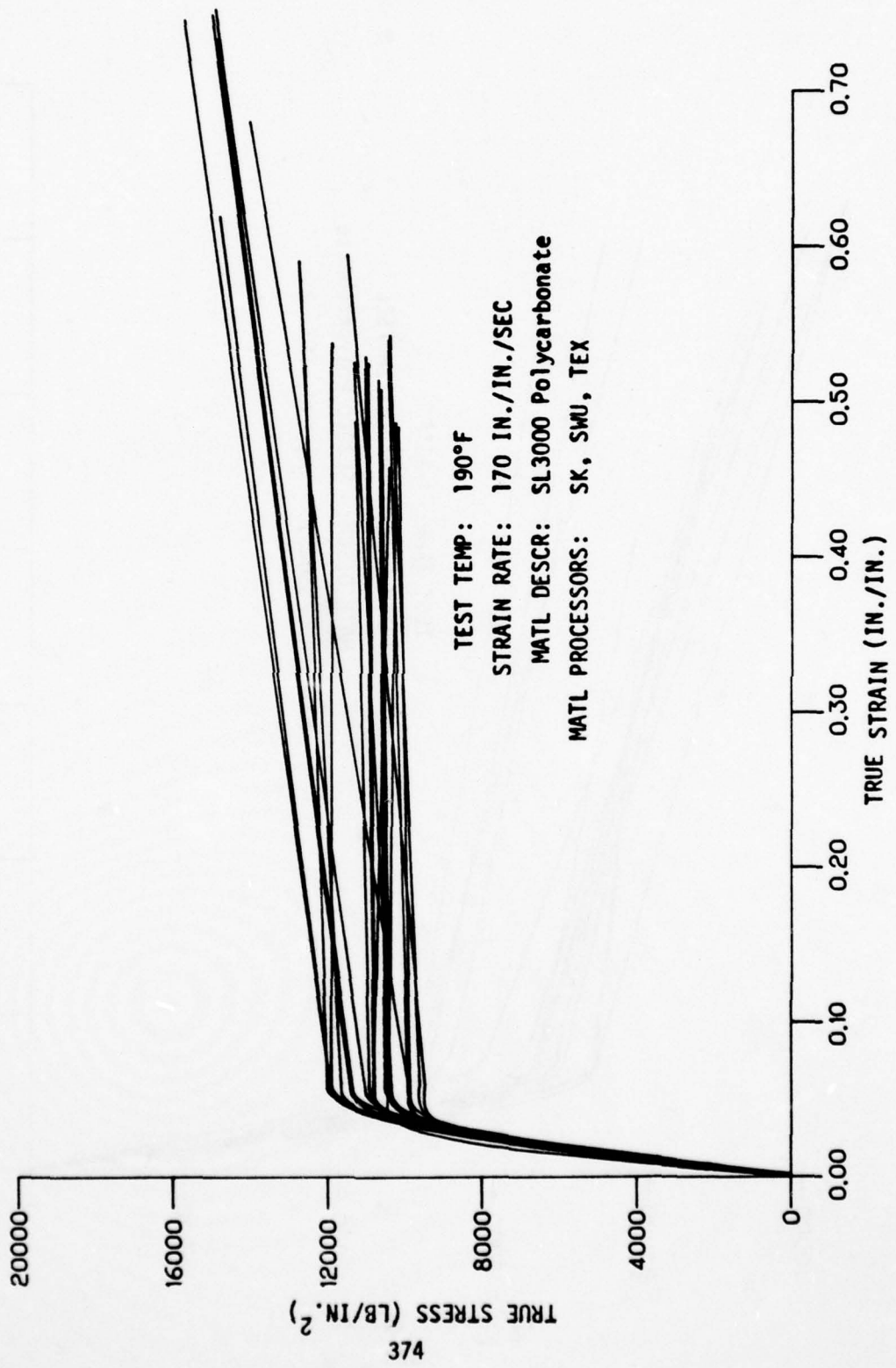


Figure L96. Tensile Test Curves.- Proposed Design Allowables.

*X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
 **** LOAD RELEASE RELOCATION FACTOR = 0.0540 *****
 TENSILE, CIG 120, 3-07-78; J.F. BURKE X37544
 THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
 ENTER NUMBER OF DATA FILES

?

2

DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)

?

2

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

?

01 1000

TEST SPECIMENS	END POINT	STRESS	STRAIN
1 SK601-1381	23682.	0.599	
2 SK601-1382	19685.	0.530	
3 SK601-1384	22201.	0.593	
4 TEX601-1392	14667.	0.047	
5 TEX601-1393	20560.	0.420	
6 SK611-1417	30082.	0.605	
7 SK611-1418	31586.	0.624	
8 SK611-1419	23526.	0.415	
9 SK611-1420	30993.	0.592	
10 SK611-1421	25568.	0.472	
11 SWU611-1422	27452.	0.543	
12 SWU611-1423	26298.	0.461	
13 SWU611-1424	13793.	0.050	
14 SWU611-1425	26583.	0.478	
15 SWU611-1426	26452.	0.559	

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

?

1

?

1

16 SWU569-1189	28411.	0.556
17 SWU569-1190	22860.	0.203
18 SWU569-1191	23527.	0.328

STRAIN AT FRACTURE POINT IS NOT NORMAL

	AVG	STD DEV	A	B	C
FRACTURE STRAINS	= 0.450	0.180	-0.157	0.094	0.234
FRACTURE STRESSES	= 24746.660	4523.027	9504.060	15218.205	19314.505

ORIGINAL CURVES TRUNCATED AT 0.021 STRAIN

BASE CURVE IS 5 OF CURVES USED.

NOT NORMAL	STRAIN	STRESS	DCRIT	DCAC
	0.0017	657.	0.2000	0.2019
NOT NORMAL	0.0627	19207.	0.2000	0.2030
	0.0647	19301.	0.2000	0.2116
NOT NORMAL	0.0647	19301.	0.2000	0.2116
	0.0674	19496.	0.2000	0.2109
	0.0700	19549.	0.2000	0.2032
	0.0728	19158.	0.2000	0.2307
	0.0756	19296.	0.2000	0.2408
	0.0756	19659.	0.2000	0.2477
	0.0785	19351.	0.2000	0.2362
	0.0785	19716.	0.2000	0.2440
	0.0814	19407.	0.2000	0.2314
	0.0814	19774.	0.2000	0.2392

YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.

	AVG	STD DEV	A	B	C
YIELD STRESS	= 19353.841	2295.305	11618.661	14022.908	10597.179
SECANT TO YIELD STRESS	= 237648.311		142667.	182012.	203799.

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.010	406954.	0.010	215760.	0.010	294961.	0.010	338017.
4	0.021	413050.	0.021	236731.	0.021	310022.	0.021	350605.
6	0.035	390185.	0.035	224334.	0.035	293037.	0.035	331070.
8	0.053	332683.	0.053	193796.	0.053	251329.	0.053	283180.

STRAIN AT END OF BASE CURVE = 0.005

	STRAIN	STD DEV	AVG	A	B	C
ELASTIC MODULUS AT 0.005	58161.	406410.	223620.	299340.	341275.	

CHECK ON CALC-MEAN MODULUS ON TEST CURVES = 407448.

WARNING-MAX CLAMP(E) = 432281. AT STRAIN = 0.011

AREA UNDER AVERAGE DESIGN CURVE = 9194.579

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Figure L97. Computer Run - Proposed Design Allowables (75°F).

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1 (X) (USE) (SELECT) 1 (NAME) 1 (LORUSS) 1 (077553.4411.00.11)
2 *** LOAD NAME= *** IDENTIFIER FACTOR = OFFEND *****
3 TENSILE CIG 101, 1-07-70; J.F. LUSKE X37544
4 THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
5 ENTER NUMBER OF DATA FILES
6
7
8 DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
9 (1=YES, 2=NO)
10
11
12 X-SCALE Y-SCALE TO CORRECT GERRER DIGITIZED DATA
13
14
15 01 1000
16 TEST SPECIMENS- END POINT STRESS STRAIN
17 1 SK601-1332 15759. 0.546
18 2 SK601-1333 16842. 0.571
19 3 SK601-1334 19892. 0.677
20 4 SWU601-1325 11535. 0.439
21 5 SWU601-1326 12454. 0.666
22 6 SWU601-1329 16065. 0.554
23 7 SWU601-1330 19435. 0.748
24 8 SWU601-1331 15525. 0.515
25 9 SWU601-1364 12624. 0.673
26 10 TEX601-1338 13738. 0.481
27 11 TEX601-1339 12773. 0.374
28 12 TEX601-1340 14449. 0.541
29 13 TEX601-1341 12642. 0.341
30 14 TEX601-1342 14384. 0.457
31 15 SK611-1402 15931. 0.436
32 16 SK611-1403 17557. 0.472
33 17 SK611-1404 18156. 0.532
34 18 SK611-1405 17339. 0.527
35 19 SK611-1406 19607. 0.600
36 20 SWU611-1397 16457. 0.444
37 21 SWU611-1398 19540. 0.632
38 22 SWU611-1399 18347. 0.570
39 23 SWU611-1400 15560. 0.475
40 24 SWU611-1401 15866. 0.478
41
42
43 FRACTURE STRAINS. = AVG STD DEV A B C
44 FRACTURE STRESSES = 16479.895 2358.366 8977.934 12109.643 13552.676
45 ORIGINAL CURVES TRUNCATED AT 0.081 STRAIN
46 BASE CURVE IS 14 OF CURVES USED.
47
48
49 YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
50
51
52 YIELD STRESS = 13089.538 AVG STD DEV A B C
53 SECANT TO YIELD STRESS = 161248.858 924.970 10147.209 11375.569 12059.122
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Figure L98. Computer Run - Proposed Design Allowables (-30°F).

AD-A064 797

DOUGLAS AIRCRAFT CO LONG BEACH CALIF
TESTING FOR MECHANICAL PROPERTIES OF MONOLITHIC AND LAMINATED P--ETC(U)
OCT 78 F E GREENE

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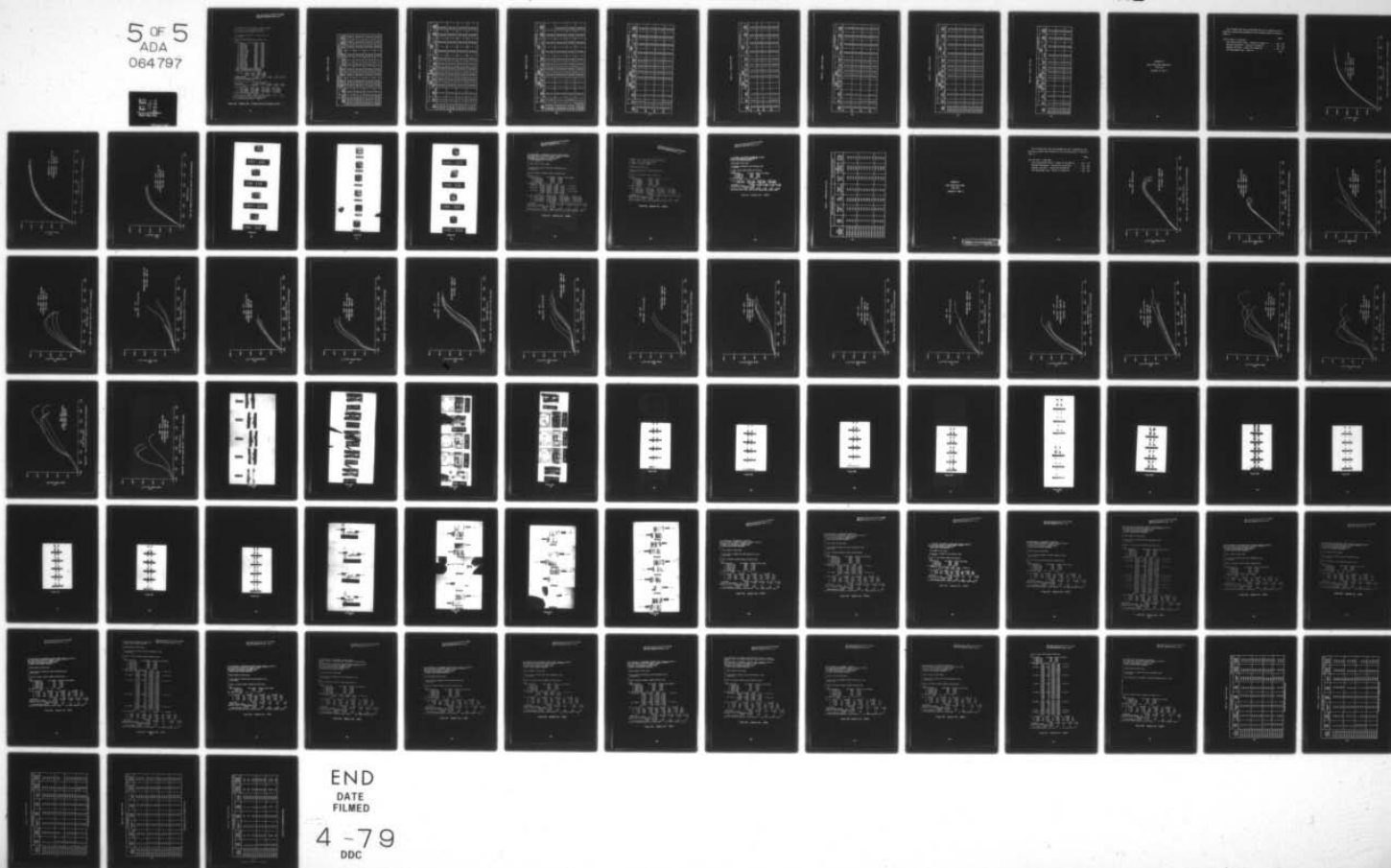
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5 OF 5
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ex clst(stestr) '04(av,8) 2(077003.4 011.00073) 1(1000-0)'
DATA LINE NUMBER = LOCATION FACTOR = 010000 *****
TEST, CMC 121, 3-07-77; J.F. POPEL 737644
THIS PROGRAM IS FOR TENSION TEST CURVES ONLY
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERRER DIGITIZED DATA
?
.01 1000
TEST SPECIMENS- END POINT STRESS STRAIN
1 SK601-1366 11027. 0.529
2 SK601-1367 10625. 0.514
3 SK601-1368 14021. 0.630
4 SK601-1369 11324. 0.524
5 SK601-1370 10017. 0.507
6 SKU601-1372 10411. 0.542
7 SKU601-1373 11505. 0.594
8 SKU601-1374 10450. 0.539
9 SKU601-1375 10172. 0.463
10 TEX601-1376 10237. 0.486
11 TEX601-1377 10654. 0.492
12 TEX601-1378 10411. 0.457
13 TEX601-1379 10957. 0.524
14 SK611-1412 12594. 0.523
15 SK611-1413 11506. 0.537
16 SK611-1414 15719. 0.745
17 SK611-1415 14794. 0.619
18 SKU611-1407 15003. 0.748
19 SKU611-1408 12758. 0.590
20 SKU611-1409 14919. 0.752
21 SKU611-1410 14858. 0.733
22 SKU611-1411 11282. 0.466
STRAIN AT FRACTURE POINT IS NOT NORMAL
STRAIN AT FRACTURE POINT IS NOT NORMAL
STRAIN AT FRACTURE POINT IS NOT NORMAL
NOT NORMAL STRAIN SSTRESS AVG STD DEV A B C
0.5369 11324. 0.1880 0.2060
0.5393 11505. 0.1880 0.2156
FRACTURE STRAINS = 0.573 0.097 0.261 0.391 0.463
FRACTURE STRESSES = 12104.695 1856.366 6006.973 2547.009 9950.011
ORIGINAL CURVES TRUNCATED AT 0.061 STRAIN
BASE CURVE IS 16 OF CURVES USED.
YIELD STRESS IS STRESS AT TRUNCATION STRAIN VALUE.
YIELD STRESS = 10304.726 790.423 2249.290 9313.929 9905.229
SECANT TO YIELD STRESS = 176113.273 134461. 151815. 161452.
AVG A B C
PC NO. STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.011 323159. 0.011 192156. 0.011 246737. 0.011 277047.
4 0.021 315281. 0.021 241352. 0.021 272446. 0.021 289435.
6 0.031 286975. 0.031 244721. 0.031 262325. 0.031 272102.
8 0.042 245915. 0.042 205682. 0.042 222444. 0.042 231753.
STRAIN AT 2ND PT ON BASE CURVE = 0.005
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.005 41735. 328201. 205826. 256813. 285126.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES = 326562.
WARNING-MAX SLOPE(E) = 325719. AT STRAIN = 0.007
AREA UNDER AVERAGE DESIGN CURVE = 6322.047

```

Figure L99. Computer Run - Proposed Design Allowables (190°F).

TABLE 11. TENSILE TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA					TEST CALCULATIONS DATA						
	TEST TEMP (°F)	STRAIN RATE (IN/IN/SEC)	SPECIMEN LENGTH		SPECIMEN DIAMETER		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	SPECIMEN AREA		TRUE RUPTURE STRESS ² (LBS/IN ²)	TRUE RUPTURE STRAIN ¹ (IN/IN)
			BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN.)	AFTER TEST (IN.)			B ² BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)		
SMU523-1104	77	221	0.778	0.874	0.095	0.076	89	68	.0071	.0045	15111	.4560
SMU523-1105	77	208	0.785	0.853	0.097	0.083	89	71	.0074	.0053	13396	.3338
SMU523-1108	77	105	0.782	0.842	0.095	0.082	81	71	.0071	.0053	13396	.2907
SMU523-1109	77	119	0.799	0.847	0.098	0.082	86	69	.0075	.0052	13269	.3720
SMU523-1090	78	621	0.784	0.834	0.098	0.076	109	87	.0075	.0045	19333	.5165
SMU523-1099	78	540	0.783	0.883	0.097	0.077	102	67	.0074	.0047	14255	.4539
SMU523-1100	78	420	0.798	0.884	0.098	0.075	109	93	.0075	.0044	21136	.5390
SMU523-1103	78	221	0.778	0.874	0.095	0.076	89	68	.0071	.0045	15111	.4544
SMU523-1107	78	184	0.774	0.853	0.096	0.078	98	94	.0072	.0047	20000	.4318
SMU523-1111	-30	197	0.775	0.812	0.094	0.084	95	85	.0069	.0055	15455	.2325
SMU523-1112	-30	173	0.775	0.843	0.095	0.076	103	91	.0071	.0045	20222	.4544
SMU523-1113	-30	152	0.779	0.833	0.098	0.076	122	106	.0075	.0055	19273	.3159
SMU523-1114	-30	100	0.784	0.822	0.099	0.087	137	125	.0077	.0059	21186	.2660
SMU523-1115	-30	120	0.765	0.771	0.098	0.096	126	106	.0075	.0072	14722	.0412
SMU523-1117	190	233	0.775	0.842	0.095	0.084	61	56	.0071	.0055	10182	.2553
SMU523-1118	190	217	0.798	0.843	0.098	0.075	71	51	.0075	.0044	11591	.5330
SMU523-1120	190	161	0.798	0.873	0.097	0.072	61	47	.0074	.0040	11750	.6138

TABLE L3. TENSILE TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA							TEST CALCULATIONS DATA				
	TEST TEMP (°F)	STRAIN RATE (IN./IN./SEC)	SPECIMEN LENGTH		SPECIMEN DIAMETER		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	SPECIMEN AREA		TRUE RUPTURE STRESS (LBS/IN. ²)	TRUE RUPTURE STRAIN (IN./IN.)
			BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)			BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)		
SAJ601-1306	-30	202	----	----	0.219	0.219	536	534	.0377	.0377	14164	----
SAJ601-1307	-30	126	----	----	0.219	0.219	566	543	.0377	.0377	14403	----
SAJ601-1308	-30	113	----	----	0.219	0.219	505	471	.0377	.0377	12493	----
SAJ601-1309	-30	113	----	----	0.219	0.219	536	524	.0377	.0377	13899	----
SAJ601-1390	-30	144	----	----	0.220	0.220	536	528	.0380	.0380	13895	----
SAJ601-1325	73	158	----	----	0.218	0.175	405	278	.0373	.0241	11535	.4368
SAJ601-1326	73	198	----	----	0.219	0.157	434	358	.0377	.0194	18454	.6644
SAJ601-1329	73	154	----	----	0.219	0.166	475	347	.0377	.0216	16065	.5570
SAJ601-1330	73	178	----	----	0.218	0.150	474	344	.0373	.0177	19435	.7454
SAJ601-1331	73	212	----	----	0.216	0.167	472	340	.0366	.0219	15525	.5148
SAJ601-1364	73	150	----	----	0.217	0.155	470	352	.0370	.0189	18624	.6713
SAJ601-1372	190	203	----	----	0.219	0.167	372	228	.0377	.0219	10411	.5423
SAJ601-1373	190	224	----	----	0.218	0.162	355	237	.0373	.0206	11505	.5944
SAJ601-1374	190	191	----	----	0.220	0.168	380	232	.0380	.0222	10450	.5375
SAJ601-1375	190	219	----	----	0.219	0.172	380	238	.0377	.0232	10172	.4855
SAJ601RH-1324	73	202	----	----	0.219	0.173	466	342	.0377	.0235	14553	.4724
SAJ601RH-1328	73	203	----	----	0.218	0.169	455	344	.0373	.0224	15357	.5106
SAJ601RH-1335	73	224	----	----	0.216	0.170	439	329	.0366	.0227	14493	.4789
SAJ601RH-1336	73	191	----	----	0.216	0.179	455	340	.0366	.0252	13492	.3732
SAJ601RH-1337	73	219	----	----	0.219	0.170	445	313	.0377	.0227	13789	.5065

TABLE L4. TENSILE TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA						TEST CALCULATIONS DATA					
	TEST TEMP (°F)	STRAIN RATE (IN./IN./SEC)	SPECIMEN LENGTH		SPECIMEN DIAMETER		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	SPECIMEN AREA		TRUE RUPTURE STRESS (LBS/IN. ²)	TRUE RUPTURE STRAIN (IN./IN.)
			BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)			BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)		
SMU611-1422	-30	95	-	-	.286	.218	1274	1024	.0642	.0373	27453	.5430
-1423	-30	96	-	-	.287	.228	1359	1073	.0647	.0408	26299	.4611
-1424	-30	84	-	-	.287	.286	1235	1235	.0647	.0642	19237	.0078
-1425	-30	96	-	-	.287	.226	1287	1066	.0647	.0401	25584	.4784
-1426	-30	88	-	-	.287	.217	1255	1053	.0647	.0370	28459	.5588
SMU611-1397	72	141	-	-	.287	.230	923	683	.0647	.0415	16458	.4441
-1398	72	119	-	-	.288	.210	891	676	.0651	.0346	19538	.6321
-1399	72	110	-	-	.286	.215	883	666	.0642	.0363	18347	.5702
-1400	72	110	-	-	.288	.227	891	631	.0651	.0405	15580	.4746
-1401	72	117	-	-	.287	.226	904	637	.0647	.0401	15885	.4784
SMU611-1473	72	8.7	-	-	.288	.229	804	605	.0651	.0412	14684	.4575
-1474	72	8.8	-	-	.290	.225	826	616	.0661	.0398	15477	.5073
-1475	72	5.9	-	-	.285	.229	774	580	.0638	.0412	14078	.4373
-1476	72	8.3	-	-	.287	.225	793	592	.0647	.0398	14874	.4859
-1477	72	9.3	-	-	.287	.225	801	588	.0647	.0398	14774	.4859
SMU611-1407	190	150	-	-	.288	.198	741	462	.0651	.0308	15000	.7484
-1408	190	170	-	-	.286	.213	742	454	.0642	.0356	12753	.5897
-1409	190	165	-	-	.287	.197	715	455	.0647	.0305	14918	.7520
-1410	190	162	-	-	.287	.199	728	462	.0647	.0311	14865	.7326
-1411	190	125	-	-	.287	.225	715	449	.0647	.0398	11281	.4859

TABLE L5. TENSILE TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA							TEST CALCULATIONS DATA				
	TEST TEMP (°F)	STRAIN RATE (IN./IN./SEC)	SPECIMEN LENGTH		SPECIMEN DIAMETER		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	SPECIMEN AREA		TRUE RUPTURE STRESS (LBS/IN. ²)	TRUE RUPTURE STRAIN (IN./IN.)
			BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)			BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)		
SK601-1381	-30	89	-	-	.216	.160	556	476	.0366	.0201	23682	.5993
-1382	-30	99	-	-	.220	.168	574	437	.0380	.0222	19685	.5375
-1383	-30	105	-	-	.219	.218	64	64	.0377	.0373	1716	.0607
-1384	-30	100	-	-	.220	.163	604	464	.0380	.0209	22201	.5978
SK601-1332	72	106	-	-	.218	.166	455	362	.0373	.0216	16759	.5463
-1333	72	116	-	-	.217	.163	451	352	.0370	.0209	16842	.5712
-1334	72	101	-	-	.216	.154	443	370	.0366	.0186	19892	.6769
SK601-1483	72	4.7	-	-	.217	.158	429	349	.0370	.0196	17797	.6343
-1484	72	5.5	-	-	.218	.182	431	350	.0373	.0260	13451	.3609
-1485	72	4.8	-	-	.218	.170	430	344	.0373	.0227	15154	.4974
-1487	72	4.5	-	-	.219	.177	429	351	.0377	.0246	14262	.4257
SK601-1366	190	121	-	-	.220	.169	414	247	.0380	.0224	11027	.5285
-1367	190	270	-	-	.216	.167	395	234	.0366	.0219	10685	.5136
-1368	190	144	-	-	.218	.155	373	265	.0373	.0189	14021	.6788
-1369	190	147	-	-	.217	.167	389	248	.0370	.0219	11324	.5244
-1370	190	267	-	-	.219	.170	400	241	.0377	.0227	10617	.5073

TABLE L6. TENSILE TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA							TEST CALCULATIONS DATA				
	TEST TEMP (°F)	STRAIN RATE (IN./IN./SEC)	SPECIMEN LENGTH		SPECIMEN DIAMETER		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	SPECIMEN AREA		TRUE RUPTURE STRESS (LBS/IN. ²)	TRUE RUPTURE STRAIN (IN./IN.)
			BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)			BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)		
SK611-1402	76	97	-	-	.291	.234	924	685	.0665	.0430	18930	.4360
-1403	76	114	-	-	.295	.233	938	748	.0683	.0426	17559	.4721
-1404	76	154	-	-	.295	.226	938	728	.0683	.0401	18155	.5325
-1405	76	136	-	-	.293	.225	931	690	.0674	.0398	17337	.5268
-1406	76	120	-	-	.297	.220	966	745	.0693	.0380	19605	.6009
SK611-1478	72	5.1	-	-	.293	.239	812	591	.0674	.0449	13163	.4062
-1479	72	9.4	-	-	.292	.224	814	628	.0670	.0394	15939	.5309
-1480	72	8.9	-	-	.295	.230	837	626	.0683	.0415	15084	.4982
-1481	72	8.9	-	-	.295	.238	851	629	.0683	.0445	14135	.4284
-1482	72	7.7	-	-	.295	.234	858	646	.0683	.0430	15023	.4627
SK611-1417	-30	83	-	-	.295	.218	1333	1122	.0683	.0373	30080	.6049
-1418	-30	95	-	-	.295	.216	1326	1156	.0683	.0366	31585	.6239
-1419	-30	94	-	-	.293	.238	1346	1047	.0674	.0445	23528	.4152
-1420	-30	87	-	-	.293	.218	1503	1156	.0674	.0373	30992	.5917
-1421	-30	98	-	-	.295	.233	1401	1102	.0683	.0426	25869	.4721
SK611-1412	190	154	-	-	.295	.227	816	510	.0683	.0405	12593	.5226
-1413	190	150	-	-	.293	.224	791	469	.0674	.0394	11904	.5369
-1414	190	132	-	-	.293	.202	809	503	.0674	.0320	15719	.7449
-1415	190	143	-	-	.293	.215	816	537	.0674	.0363	14793	.6188

TABLE L7. TENSILE TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA										TEST CALCULATIONS DATA				
	TEST TEMP (°F)	STRAIN RATE (IN./IN./SEC)	SPECIMEN LENGTH		SPECIMEN DIAMETER		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	SPECIMEN AREA		TRUE RUPTURE STRESS (LBS/IN. ²)	TRUE RUPTURE STRAIN (IN./IN.)			
			BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)			BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)					
TEX601-1358	72	203	-	-	.209	.175	429	326	.0343	.0241	13527	.3529			
TEX601-1359	72	187	-	-	.209	.168	425	322	.0343	.0222	14505	.4351			
TEX601-1360	72	162	-	-	.210	.173	450	332	.0346	.0235	14128	.3869			
TEX601-1361	72	330	-	-	.210	.171	443	301	.0346	.0230	13087	.4084			
TEX601-1362	72	175	-	-	.210	.173	450	332	.0346	.0235	14128	.3869			
TEX601-1353	72	210	-	-	.211	.168	441	301	.0350	.0222	13559	.4544			
TEX601-1354	72	219	-	-	.211	.171	441	312	.0350	.0230	13565	.4199			
TEX601-1355	72	237	-	-	.211	.165	431	298	.0350	.0214	13925	.4920			
TEX601-1356	72	202	-	-	.211	.170	438	312	.0350	.0227	13744	.4330			
TEX601-1357	72	197	-	-	.211	.178	459	322	.0350	.0249	12932	.3405			
TEX601-1348	72	196	-	-	.210	.165	426	294	.0346	.0214	13738	.4805			
TEX601-1349	72	250	-	-	.211	.164	441	315	.0350	.0211	14929	.5061			
TEX601-1350	72	254	-	-	.211	.162	445	280	.0350	.0206	13592	.5301			
TEX601-1351	72	231	-	-	.210	.165	433	311	.0346	.0214	14533	.4805			
TEX601-1352	72	217	-	-	.212	.169	459	325	.0353	.0224	14509	.4548			
TEX601-1338	75	185	-	-	.210	.165	443	294	.0346	.0214	13738	.4805			
TEX601-1339	75	217	-	-	.210	.174	453	304	.0346	.0238	12773	.3760			
TEX601-1340	75	210	-	-	.212	.170	459	328	.0353	.0227	14449	.4415			
TEX601-1341	75	186	-	-	.210	.177	439	311	.0346	.0246	12642	.3411			
TEX601-1342	75	234	-	-	.210	.167	443	315	.0346	.0219	14384	.4574			

TABLE L8. TENSILE TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA						TEST CALCULATIONS DATA					
	TEST TEMP (°F)	STRAIN RATE (IN./IN./SEC)	SPECIMEN LENGTH		SPECIMEN DIAMETER		YIELD LOAD (LBS)	RUPTURE LOAD (LBS)	SPECIMEN AREA		TRUE RUPTURE STRESS (LBS/IN. ²)	TRUE RUPTURE STRAIN (IN./IN.)
			BEFORE TEST (IN.)	AFTER TEST (IN.)	BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)			BEFORE TEST (IN. ²)	AFTER TEST (IN. ²)		
TEX601-1343	75	179	-	-	.211	.168	455	350	.0350	.0222	15766	.4553
TEX601-1344	75	202	-	-	.211	.172	473	329	.0350	.0232	14181	.4112
TEX601-1345	75	236	-	-	.211	.164	462	354	.0350	.0211	16777	.5061
TEX601-1347	75	250	-	-	.211	.166	441	333	.0350	.0216	15417	.4827
TEX601-1391	-30	96	-	-	.212	.162	572	494	.0353	.0206	23981	.5386
TEX501-1392	-30	92	-	-	.210	.205	561	484	.0346	.0330	14667	.0473
TEX601-1393	-30	93	-	-	.212	.172	568	477	.0353	.0232	20560	.4197
TEX601-1394	-30	106	-	-	.212	.212	568	526	.0353	.0353	15807	.0000
TEX601-1395	-30	95	-	-	.211	.211	546	546	.0350	.0350	15600	.0000
TEX601-1376	190	161	-	-	.209	.164	360	216	.0343	.0211	10237	.4859
TEX601-1377	190	183	-	-	.211	.165	375	228	.0350	.0214	10664	.4920
TEX601-1378	190	166	-	-	.210	.167	384	228	.0346	.0219	10411	.4574
TEX601-1379	190	165	-	-	.212	.163	388	229	.0353	.0209	10957	.5241

APPENDIX M
HIGH STRAIN RATE COMPRESSION
TEST DATA
(SECTION IX, PART 1)

The following test data are presented for use in conjunction with materials property data presented in the following tables of Section IX (Part 1).

	PAGES
Table 24 (Part 1, Page 361)	
Test Stress-Strain Curves - Figures M1 through M3	389 - 391
Specimen Photographs - Figures M4 through M6	392 - 394
Computer Data Runs - Figures M7 through M9.	395 - 397
Test Measurement Data - Table M1.	398

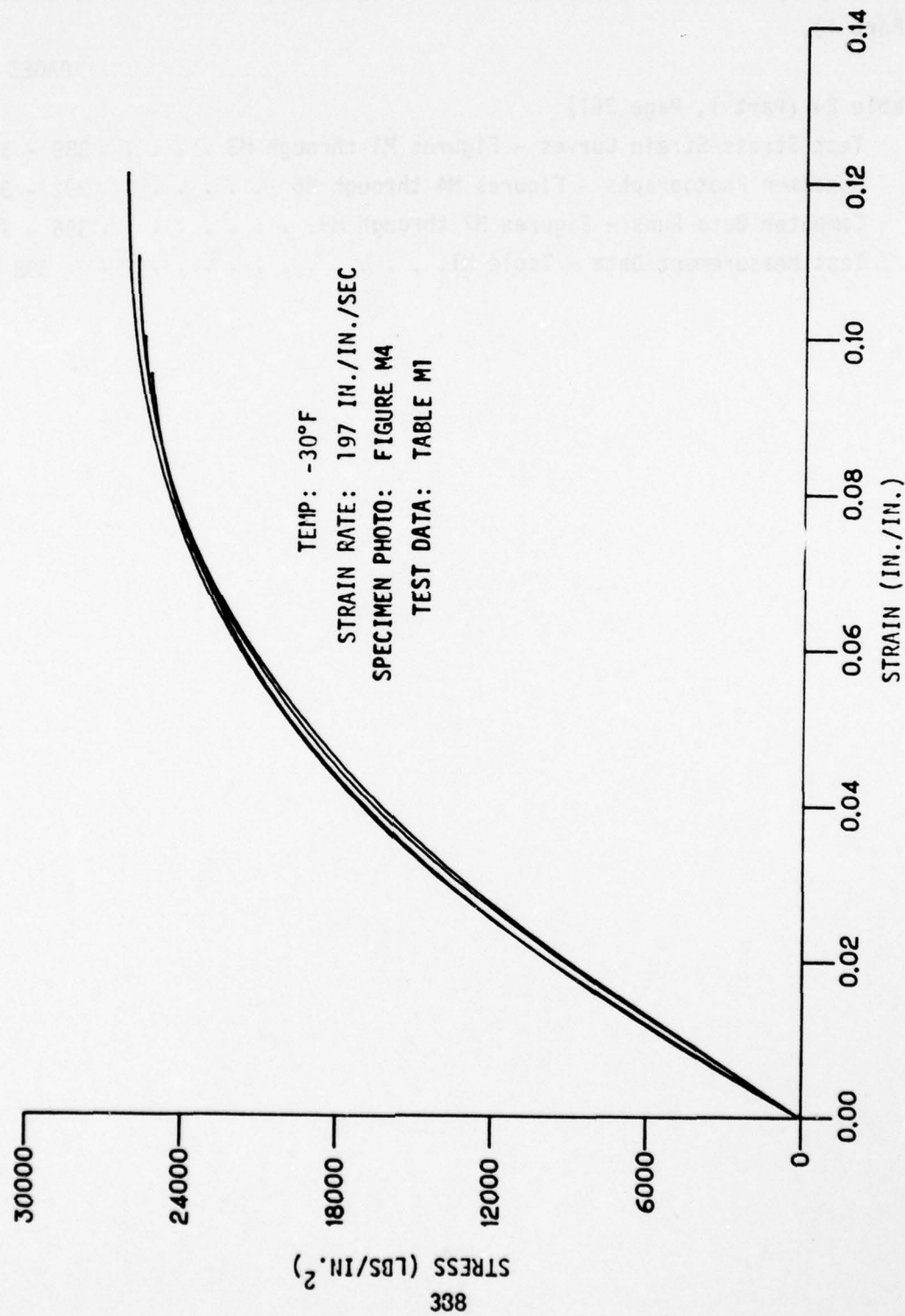


Figure M1. Compression Test Curves (SWU525 - 0.38 Polycarbonate).

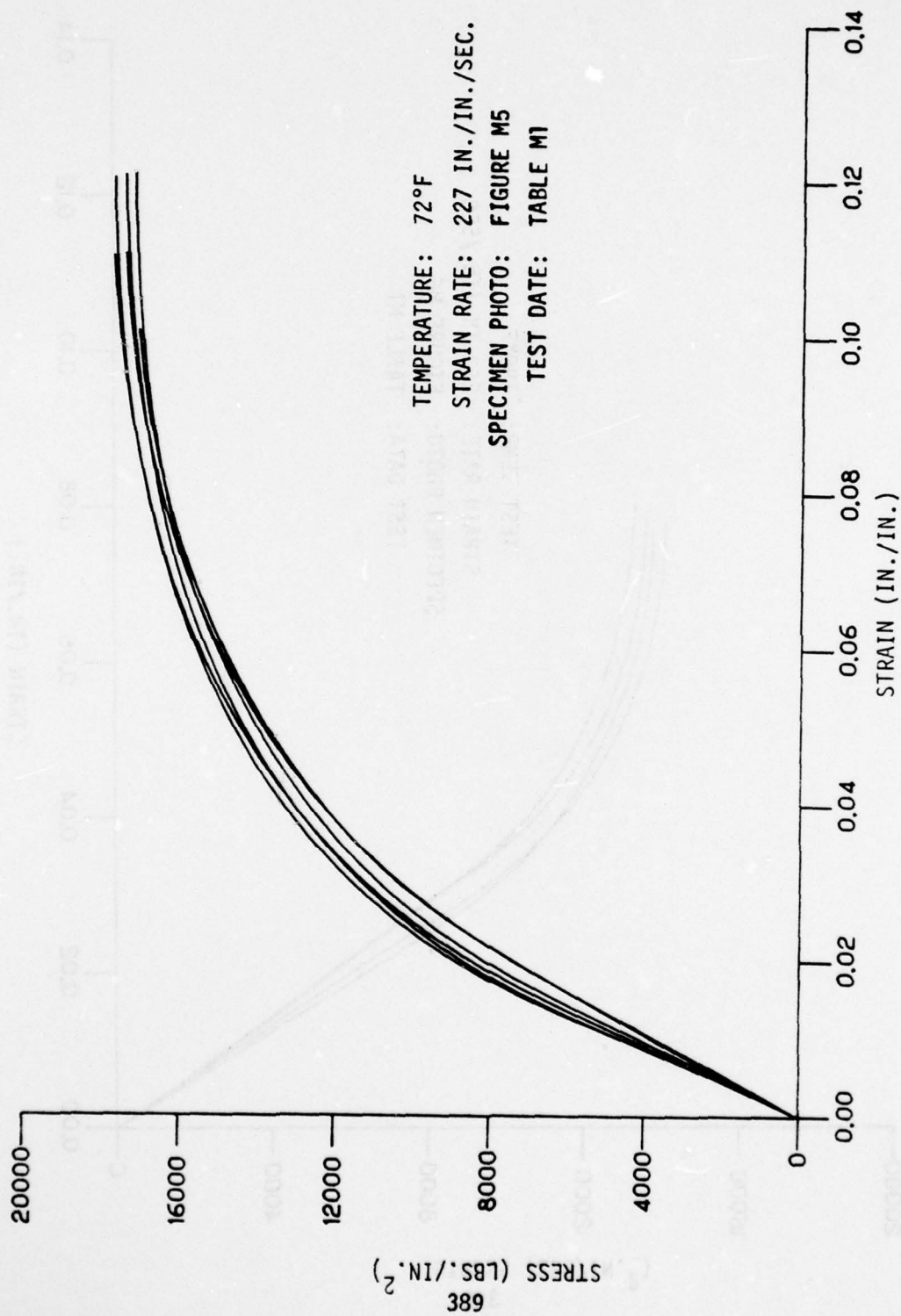


Figure M2. Compression Test Curves (SWU 525 - 0.38 Polycarbonate)

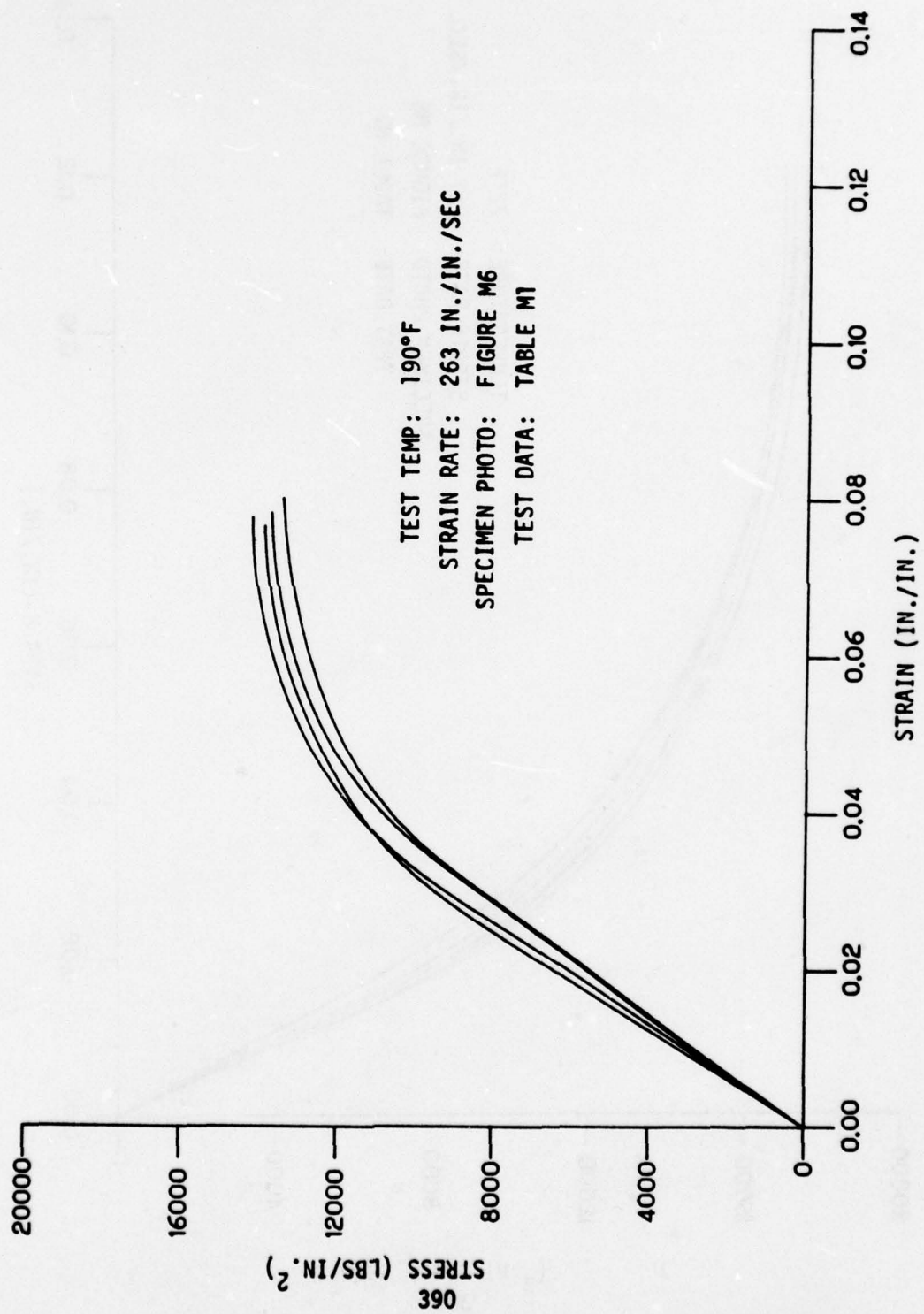


Figure M3. Compression Test Curves (SWU 525- -0.38 Polycarbonate).

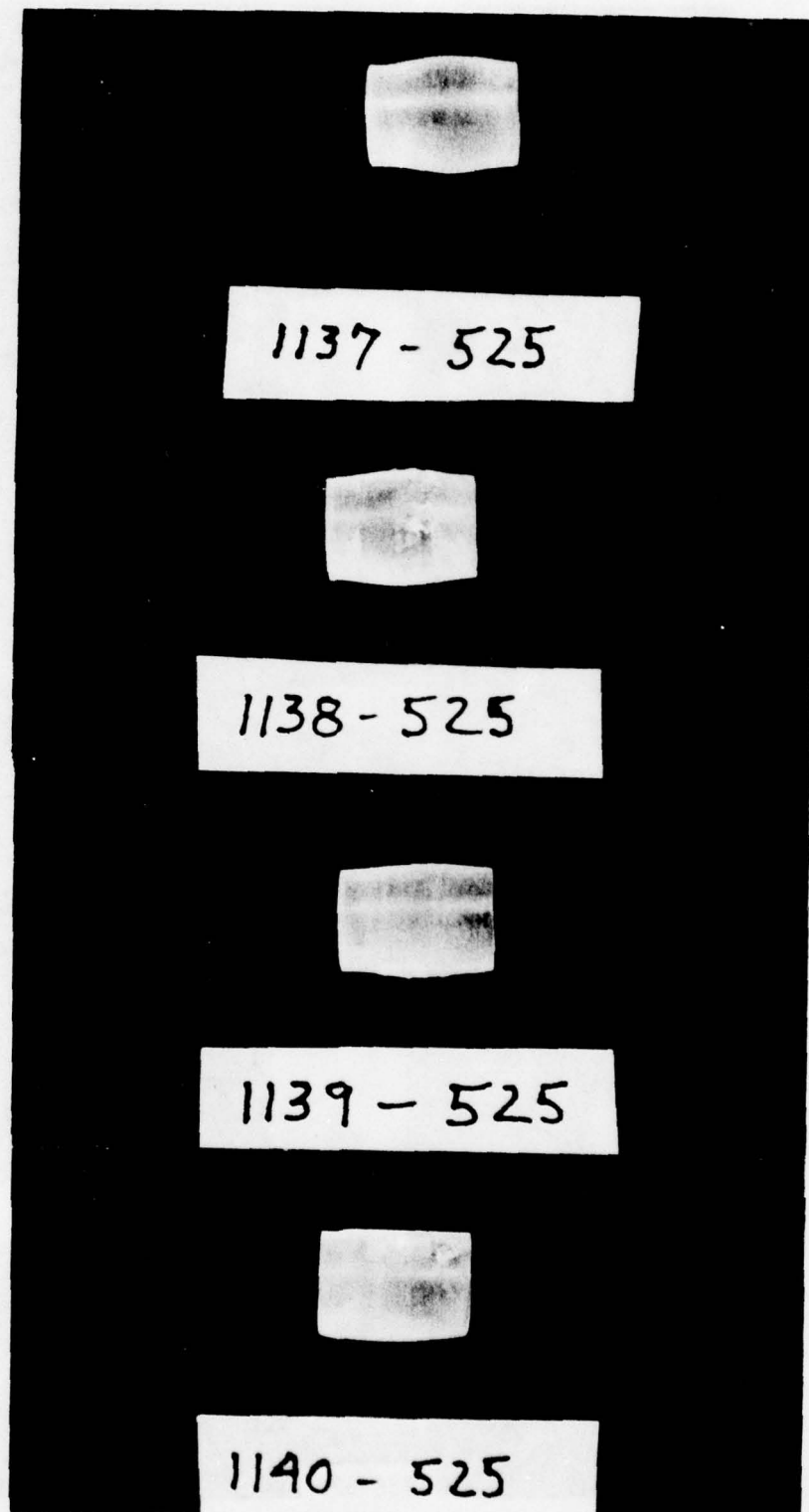


Figure M4.

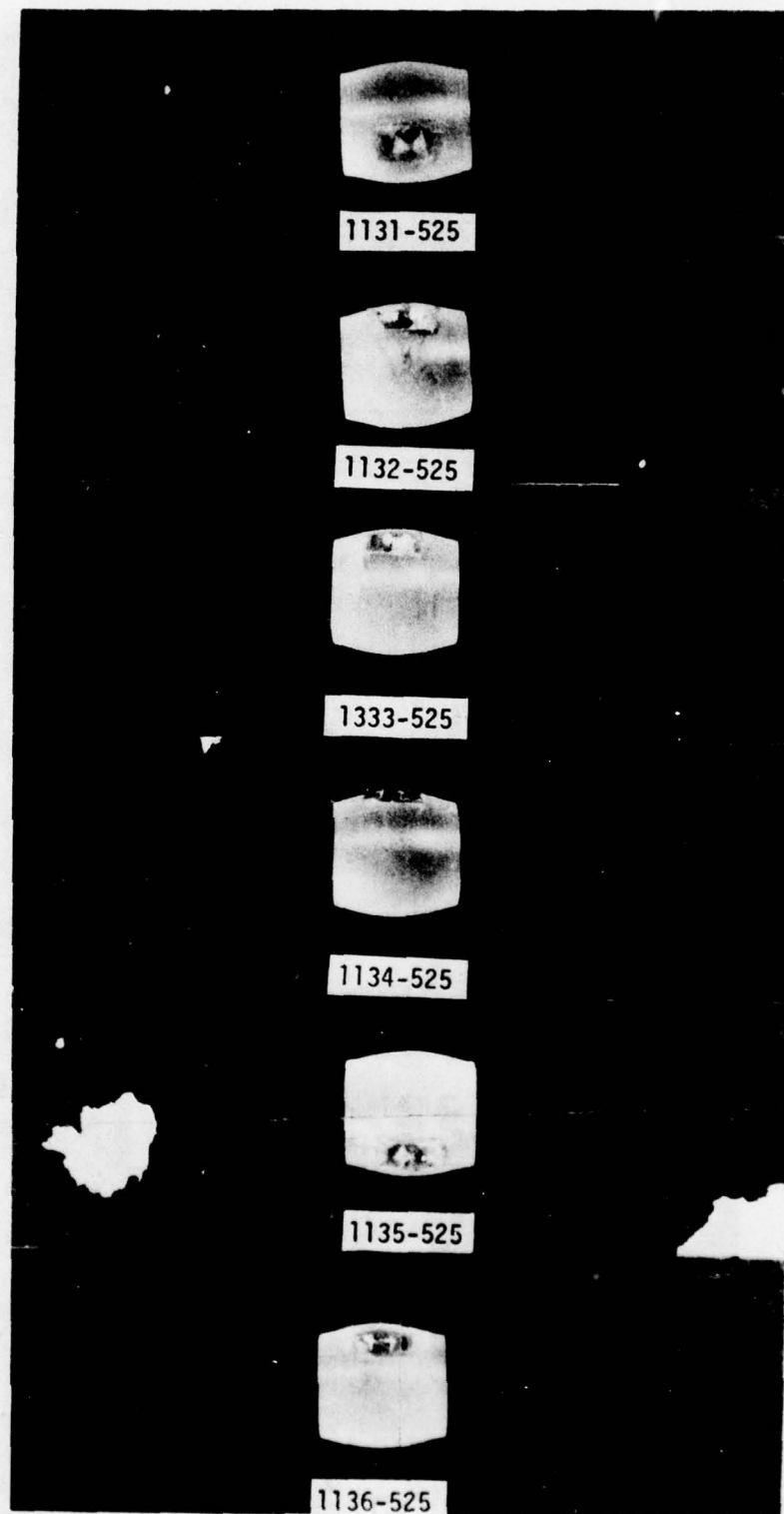
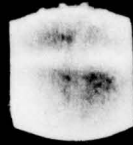
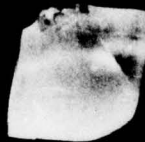


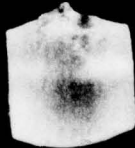
Figure M5.



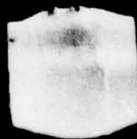
1142 - 525



1143 - 525



1144 - 525



1145 - 525

Figure M6.

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EX CLST(STSSTR) 'D1(SWU52537) G(E77623.D0211.FEG004)'
**** LOAD MODULE RELOCATION FACTOR = 2AF418 *****
TEKSSC,CHG 28A,12-14-77; J.P.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=2

?
2
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)

?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?

.01 1009

TEST SPECIMENS-	MAX STRESS	STRAIN AT MAX STRESS
1 SWU525-1137	25234.	0.095
2 SWU525-1139	25470.	0.100
3 SWU525-1C39	25721.	0.110
4 SWU525-1140	26161.	0.121

MAX STRAIN ON CURVE	4 OF	4=	0.121
NOT NORMAL	STRAIN	STRESS	OCRIT
	2.0345	24724.	0.3910
NOT NORMAL	STRAIN	STRESS	OCRIT
	0.0945	24724.	0.3910
NOT NORMAL	STRAIN	STRESS	OCRIT
	0.0345	24724.	0.3910

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.023	455742.	0.026	350979.	0.026	394233.	0.026	417422.
4	0.055	374263.	0.055	340133.	0.055	354092.	0.055	361575.
6	0.095	293121.	0.035	283819.	0.095	287623.	0.095	289562.
8	0.116	221545.	0.116	197467.	0.116	247314.	0.116	212794.

STD DEV AVG A B C
MAX STRESS = 437.092 25593.374 9255.355 20407.675 23742.798
STRAIN AT MAX STRESS = 0.011 0.106 0.026 0.059 0.077
STRAIN AT 2ND PT ON BASE CURVE= 0.016
STRAIN STD DEV AVG A B C
ELASTIC MODULUS AT 0.016 9069. 454325. 413307. 429399. 437960.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 454451. DELTA STRAIN= 0.0002

Figure M7. Computer Run - SWU525.

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** FIRST(OF TWO) '41(1.00000000) = (577522.000000000)'
**** LOAD STRESS = LOCATION FACTOR = 0.000000000 *****
1. NO. OF SPECIMENS = 10-11-77; S.F. = 0.000000000
FOR MEAN & STD DEVIATION CURVES ONLY.
SHEAR=1, COMP=2, SHORT TENSION=2
?
2
2
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)
?
2
X-SCALE Y-SCALE CORRECT GROSS DIGITIZED DATA
?
.01 1000
TEST SPECIMENS-
1 SWU525-1131 MAX STRESS STRAIN AT MAX STRESS
2 SWU525-1132 17722. 0.120
3 SWU525-1133 17754. 0.110
4 SWU525-1134 17452. 0.121
5 SWU525-1135 17231. 0.121
6 SWU525-1136 17387. 0.109
7 SWU525-1137 17441. 0.111
MAX STRAIN ON CURVE 4 OF 6 = 0.121
AVG
NO. OF SPECIMENS SEC STRAIN SEC STRAIN SEC STRAIN SEC STRAIN SEC
2 0.022 411277. 0.022 243315. 0.022 311530. 0.022 348485.
4 0.050 283042. 0.050 248552. 0.050 262211. 0.050 278511.
6 0.100 172535. 0.100 164295. 0.100 165510. 0.100 168176.
8 0.157 162102. 0.157 149277. 0.157 154061. 0.157 157527.
STD DEV
MAX STRESS = 200.784 17426.786 14979.530 16310.678 16707.528
STRAIN AT MAX STRESS = 0.008 0.114 0.072 0.020 0.008
STRAIN AT 2ND PT ON BASE CURVE = 0.010
STRAIN STD DEV
ELASTIC MODULUS AT 0.010 51005. 430020. 160070. 270070. 330012.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES = 439240. DELTA STRAIN = 0.0001

```

Figure M8. Computer Run - SWU525.

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FROM COPY FURNISHED TO DDG

st:astr: dl:swu52542: g1077623.00211.fop012)
ENR:CMG 204.12-14-77: J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=3

ENTER NUMBER OF DATA FILES

DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)

Y-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

01 1000

TEST SPECIMENS-	MAX STRESS	STRAIN AT MAX STRESS
1 SWU525-1142	13414.	0.080
2 SWU525-1143	13728.	0.078
3 SWU525-1144	13875.	0.076
4 SWU525-1145	14191.	0.077

MAX STRAIN ON CURVE 1 OF 4 0.080

PC NO.	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC	STRAIN	SEC
2	0.029	294365.	0.025	145781.	0.029	286548.	0.029	239126.
4	0.060	219433.	0.060	173203.	0.060	192110.	0.060	202246.

MAX STRESS	STD DEV	AUG	A	B	C
324.595	13791.257	10849.688	12151.940	12800.928	

STRAIN AT MAX STRESS	STD DEV	AUG	A	B	C
0.002	0.078	0.067	0.072	0.074	

STRAIN AT 2ND PT ON BASE CURVE= 0.014	STD DEV	AUG	A	B	C
24873.	288127.	131056.	195294.	229733.	

ELASTIC MODULUS AT 0.014 24873. 288127. 131056. 195294. 229733.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 290304. DELTA STRAIN= 0.0002

Figure M9. Computer Run - SWU525.

TABLE M1. COMPRESSION TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA				TEST CALCULATIONS DATA		
	TEST TEMP (°F)	INITIAL DIA. (IN)	MAX. LOAD (LBS)	STRAIN RATE (IN/IN/SEC)	INITIAL AREA (IN ²)	MAX. COMPRESSIVE STRESS (LBS/IN ²)	STRAIN AT MAX. STRESS
SMU525-1137	-30	.374	2765	204	.1099	25159	.095
SMU525-1138	-30	.375	2810	190	.1104	25453	.100
SMU525-1139	-30	.375	2840	199	.1104	25725	.110
SMU525-1140	-30	.375	2880	196	.1104	26087	.121
SMU525-1131	72	.374	1940	264	.1099	17659	.120
SMU525-1132	72	.374	1935	231	.1099	17614	.110
SMU525-1133	72	.375	1920	205	.1104	17384	.121
SMU525-1134	72	.376	1900	206	.1110	17112	.120
SMU525-1135	72	.375	1885	234	.1104	17074	.100
SMU525-1136	72	.375	1910	222	.1104	17301	.110
SMU525-1142	190	.375	1480	325	.1104	13406	.080
SMU525-1143	190	.375	1510	188	.1104	13678	.078
SMU525-1144	190	.375	1530	276	.1104	13859	.076
SMU525-1145	190	.374	1545	263	.1099	14058	.077

APPENDIX N
HIGH STRAIN RATE SHEAR
TEST DATA
(SECTION X, PART 1)

The following test data are presented for use in conjunction with materials property data presented in the following tables of Section X (Part 1).

PAGES

Table 25 (Part 1, Page 383)

Test Stress-Strain Curves - Figures N1 through N19	401 - 419
Specimen Photographs - Figures N20 through N38	420 - 438
Computer Data Runs - Figures N39 through N58	439 - 457
Test Measurement Data - Tables N1 through N5	458 - 462

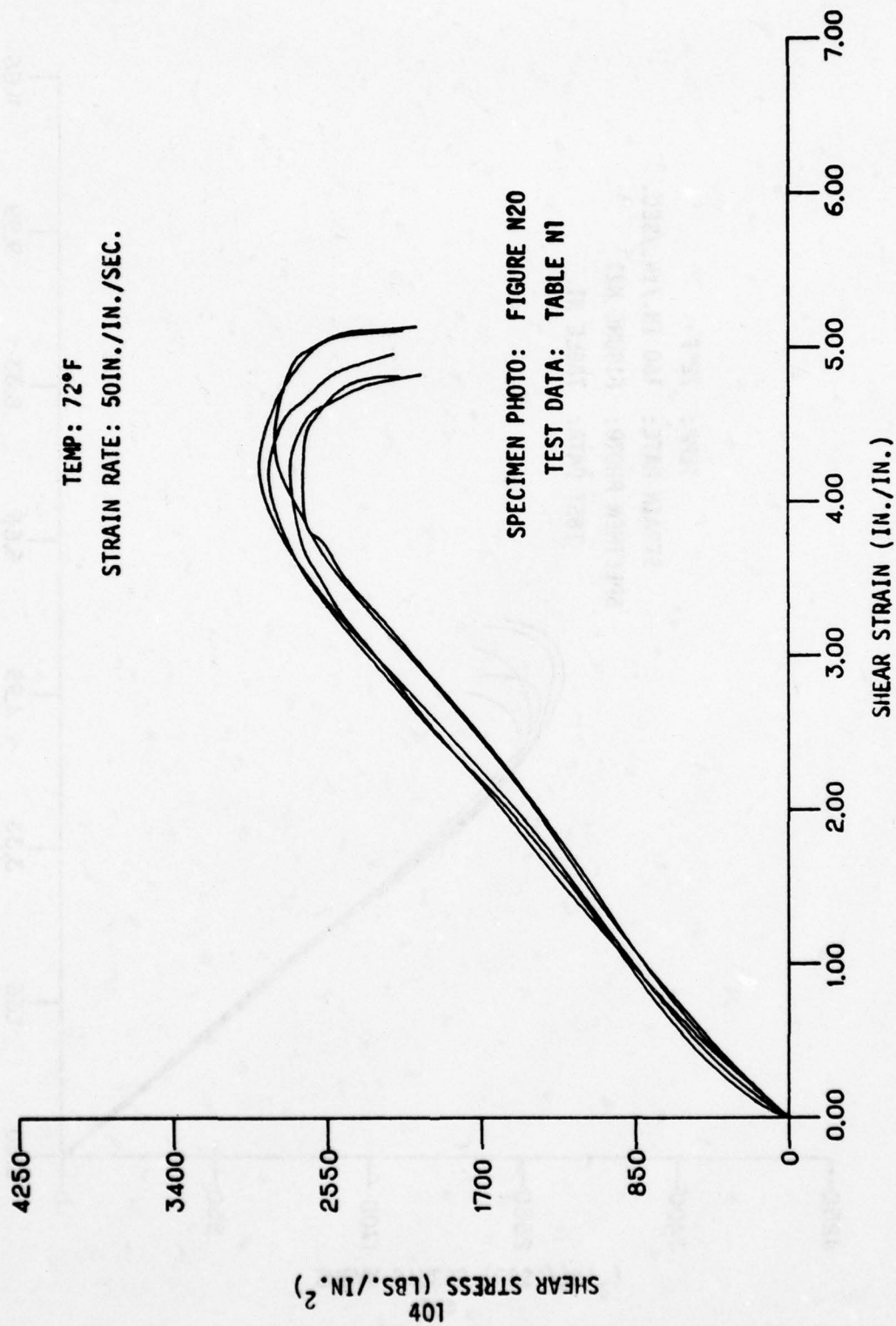


Figure N1. Shear Test Curves (PPG 519-0.12 PPG 112 Interlayer)

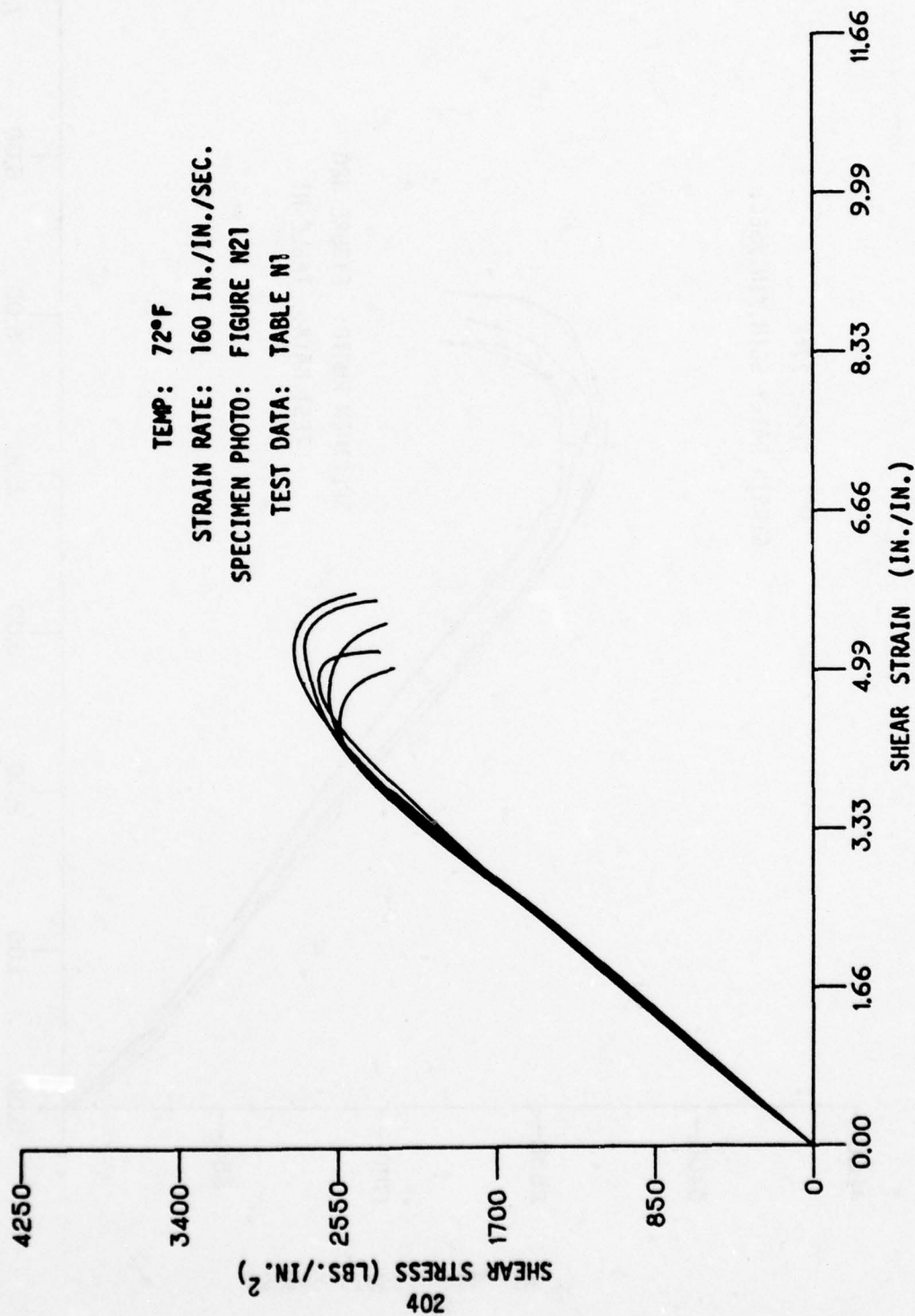


Figure N2. Shear Test Curves (PPG 519 - 0.12 PPG 112 Interlayer).

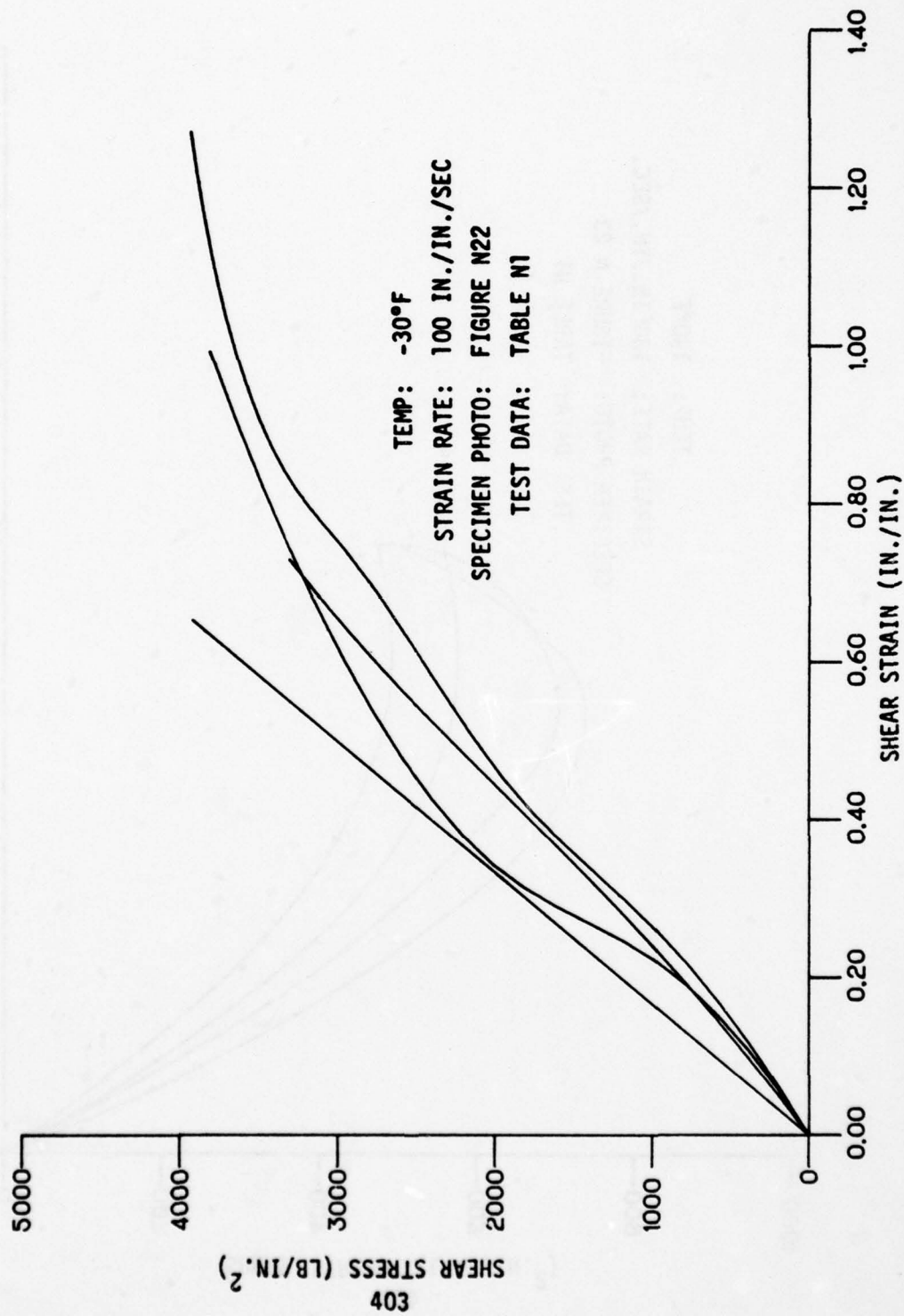


Figure N3. Shear Test Curves (PPG519-0.12 PPG112 Interlayer).

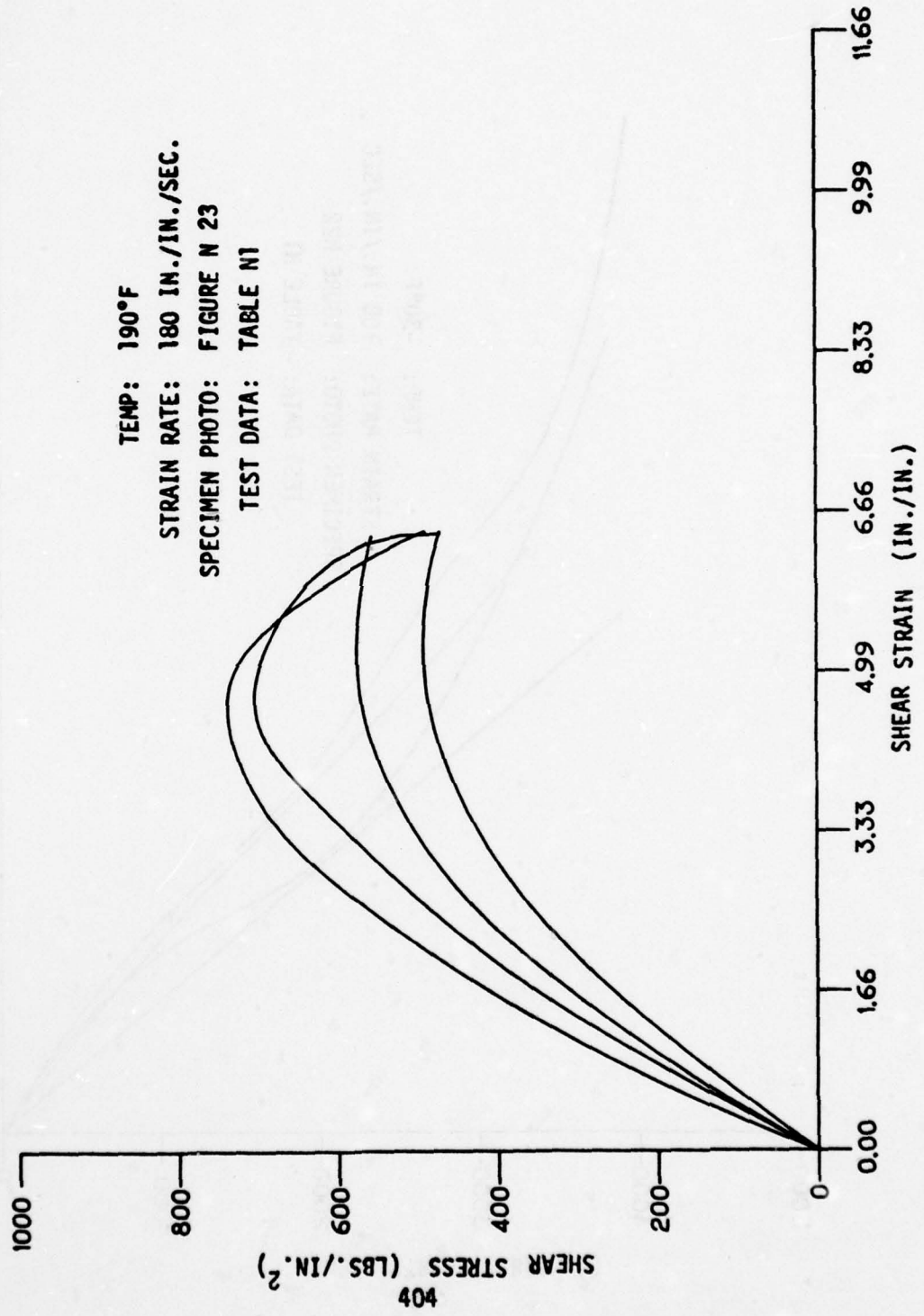


Figure N4. Shear Test Curves (PPG 519 - 0.12 PPG 112 Interlayer).

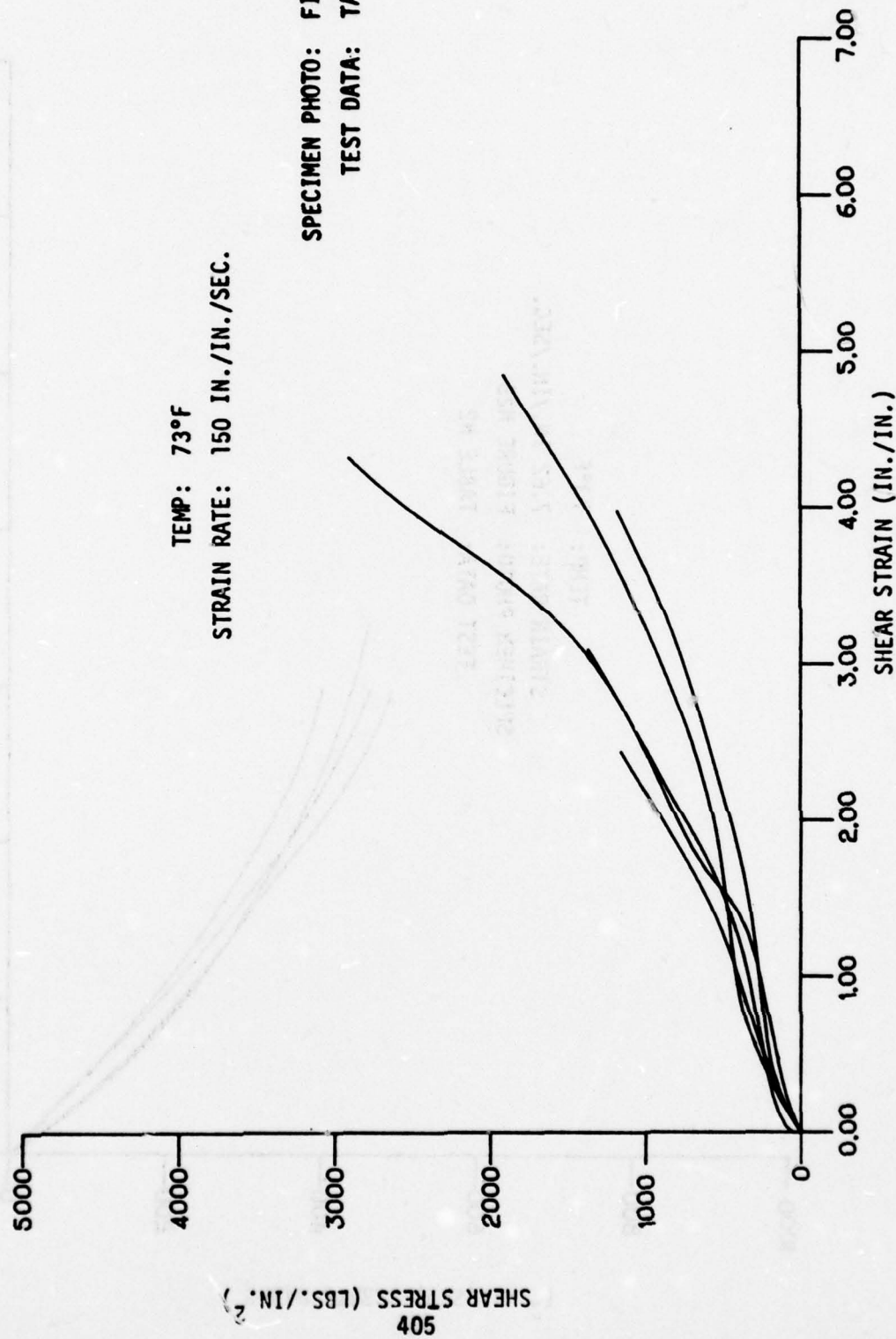


Figure N5. Shear Test Curves (SK519 - 0.12 S120 Interlayer)

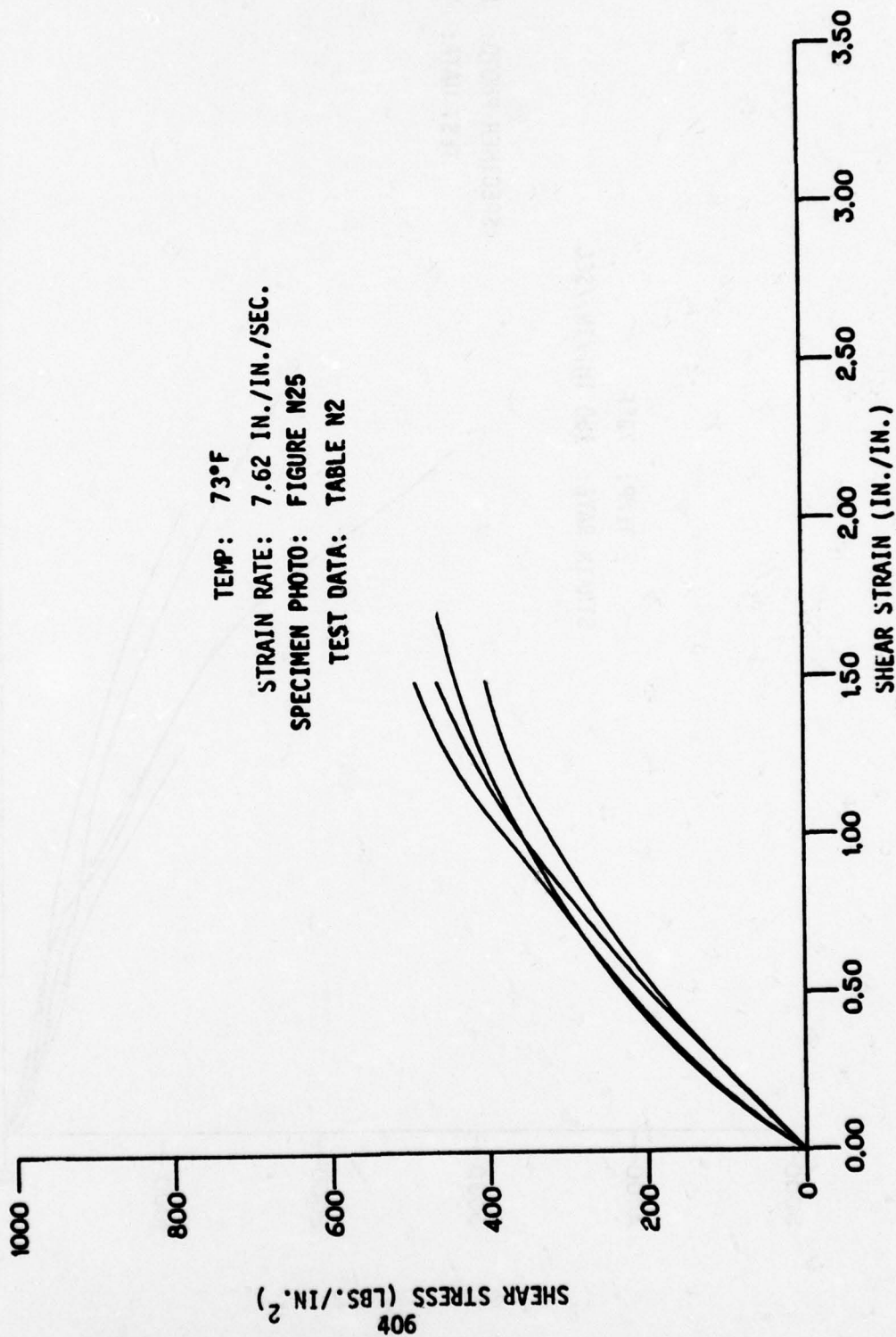


Figure N6. Shear Test Curves (SK519 - 0.12 S120 Interlayer)

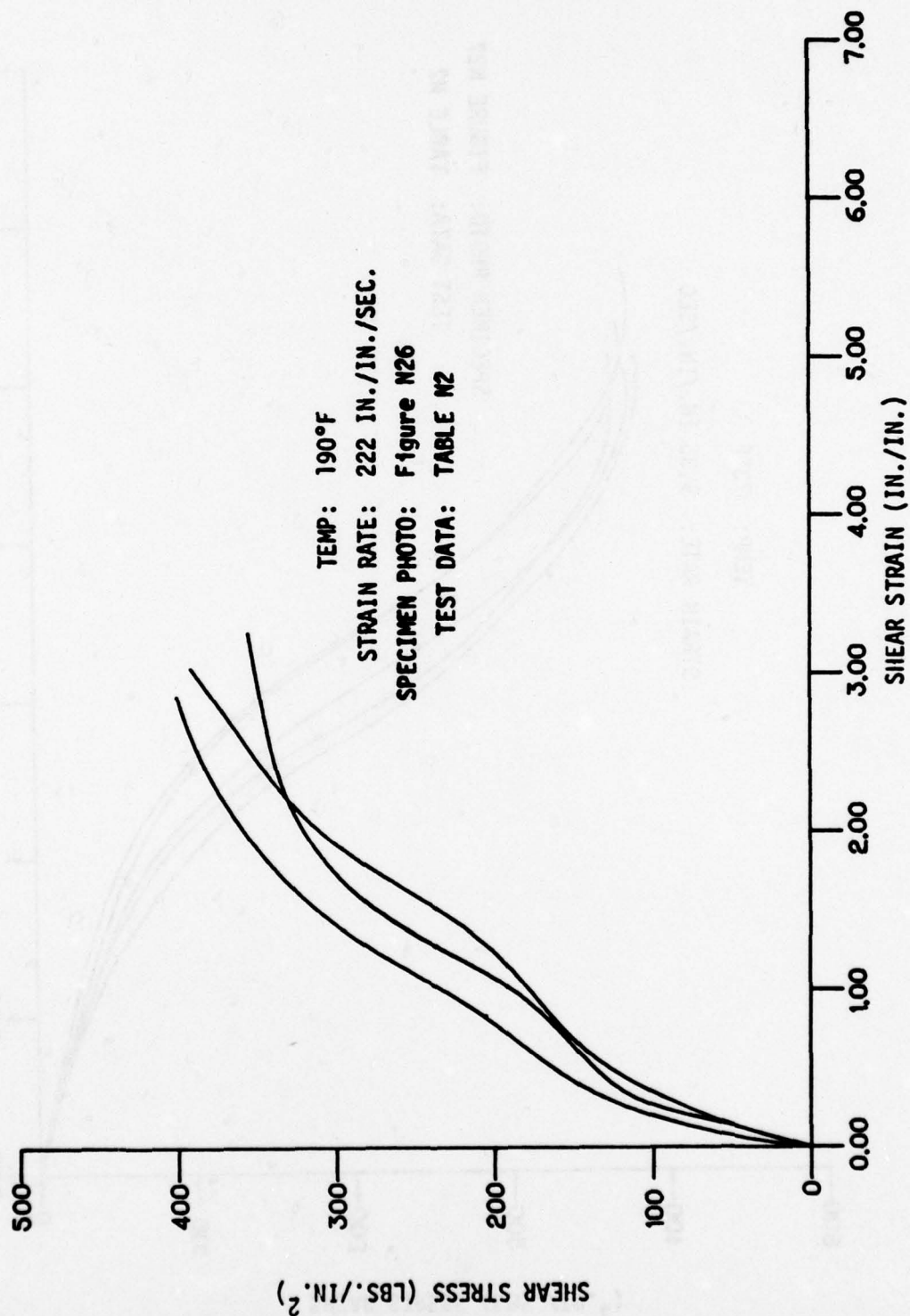


Figure N7 . Shear Test Curves (SK519 - 0.12 S120 Interlayer)

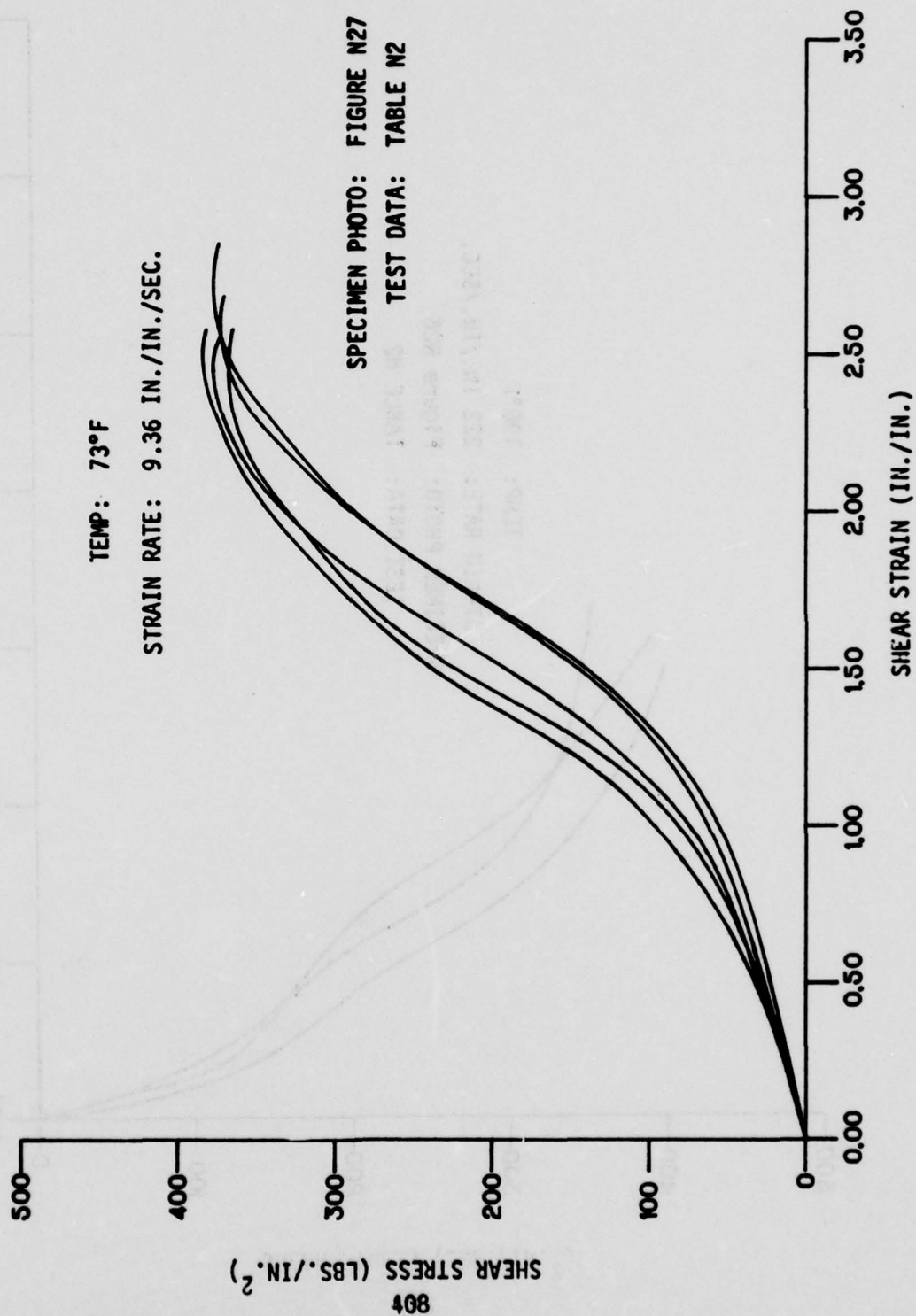


Figure N8. Shear Test Curves (SK603 - 0.12 S100 Interlayer)

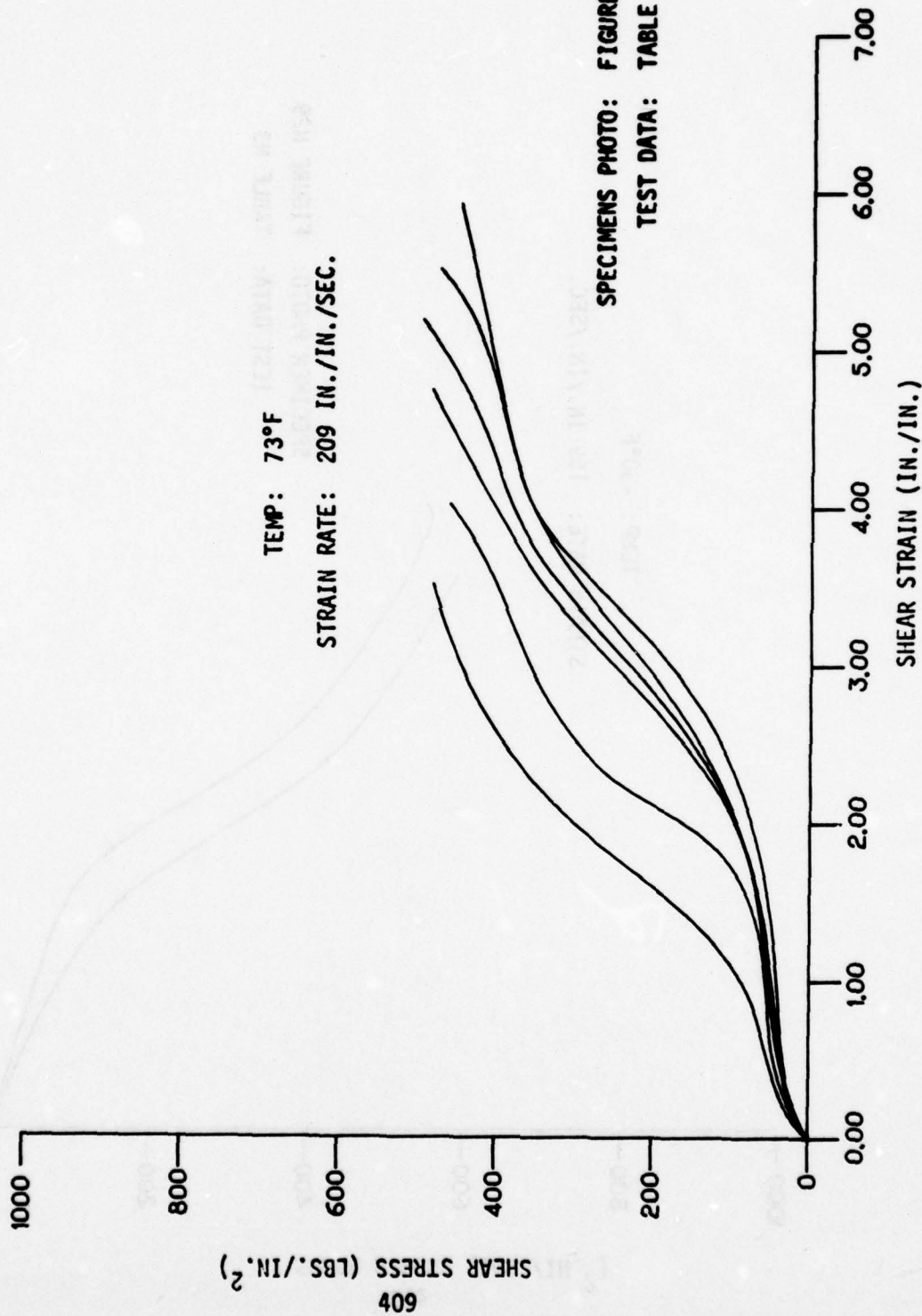


Figure N9 Shear Test Curves (SK603 - 0.12 S100 Interlayer)

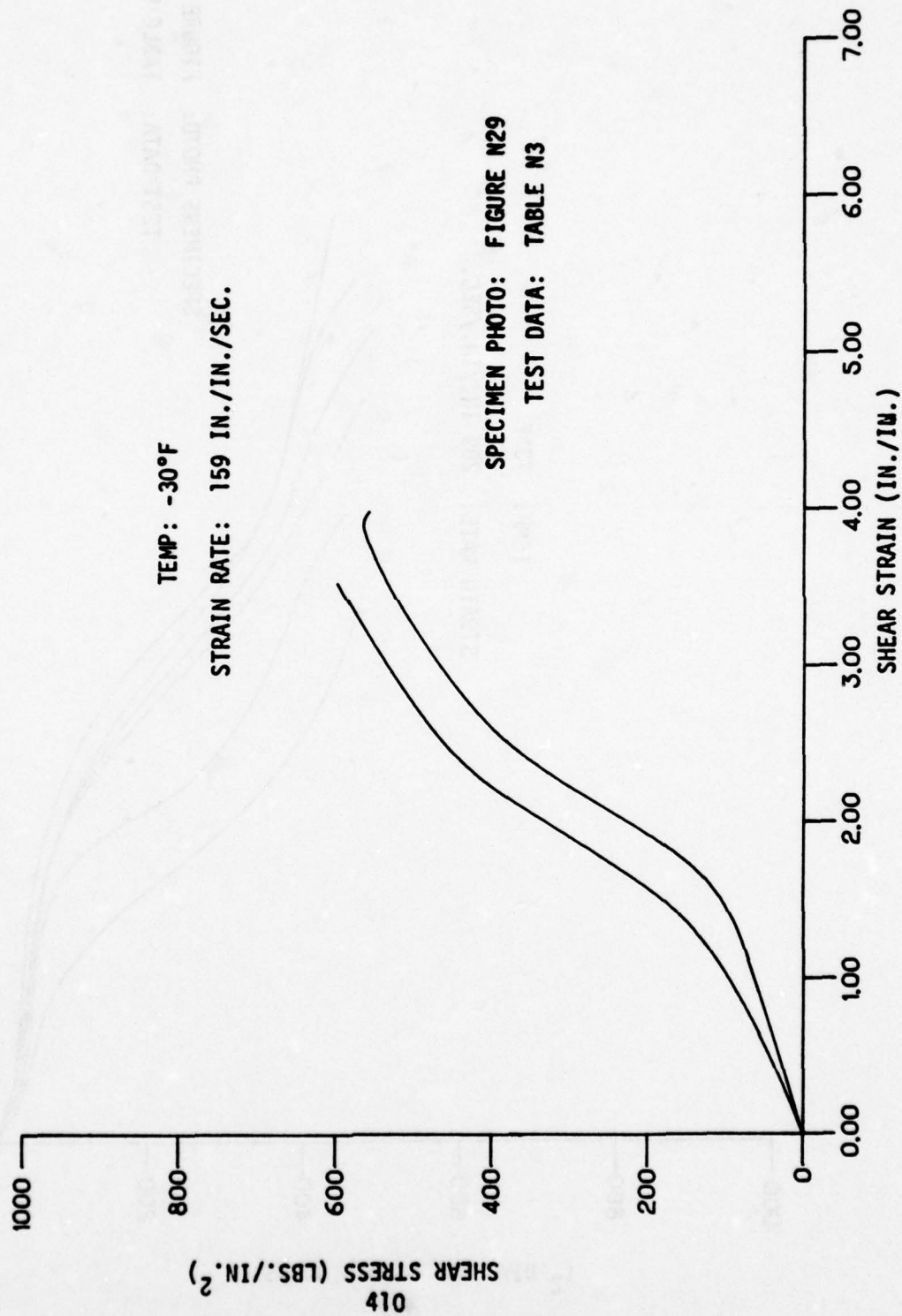


Figure N10. Shear Test Curves (SK603 - 0.12 S100 Interlayer)

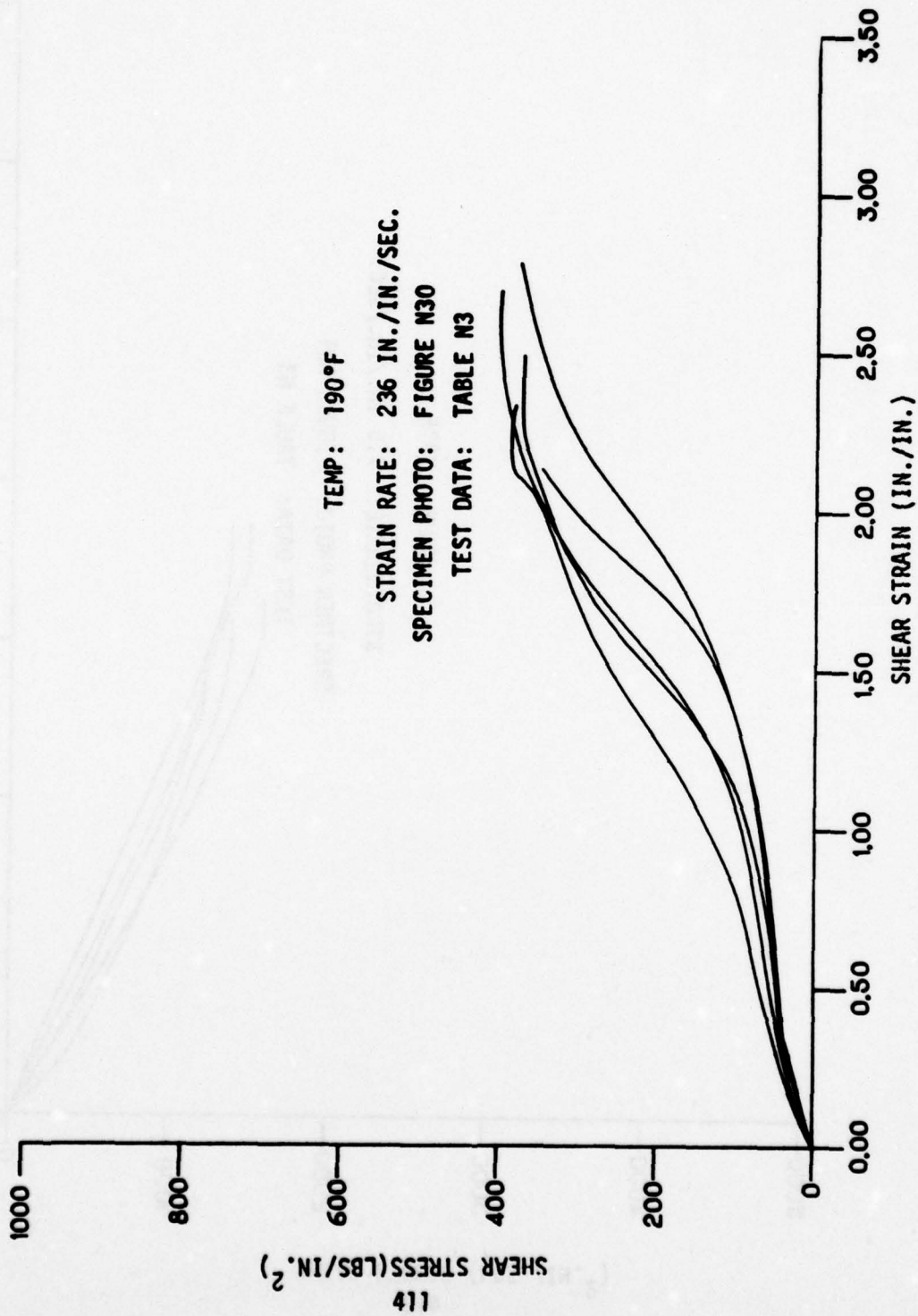


Figure N11. Shear Test Curves (SK603 - 0.12 S100 Interlayer)

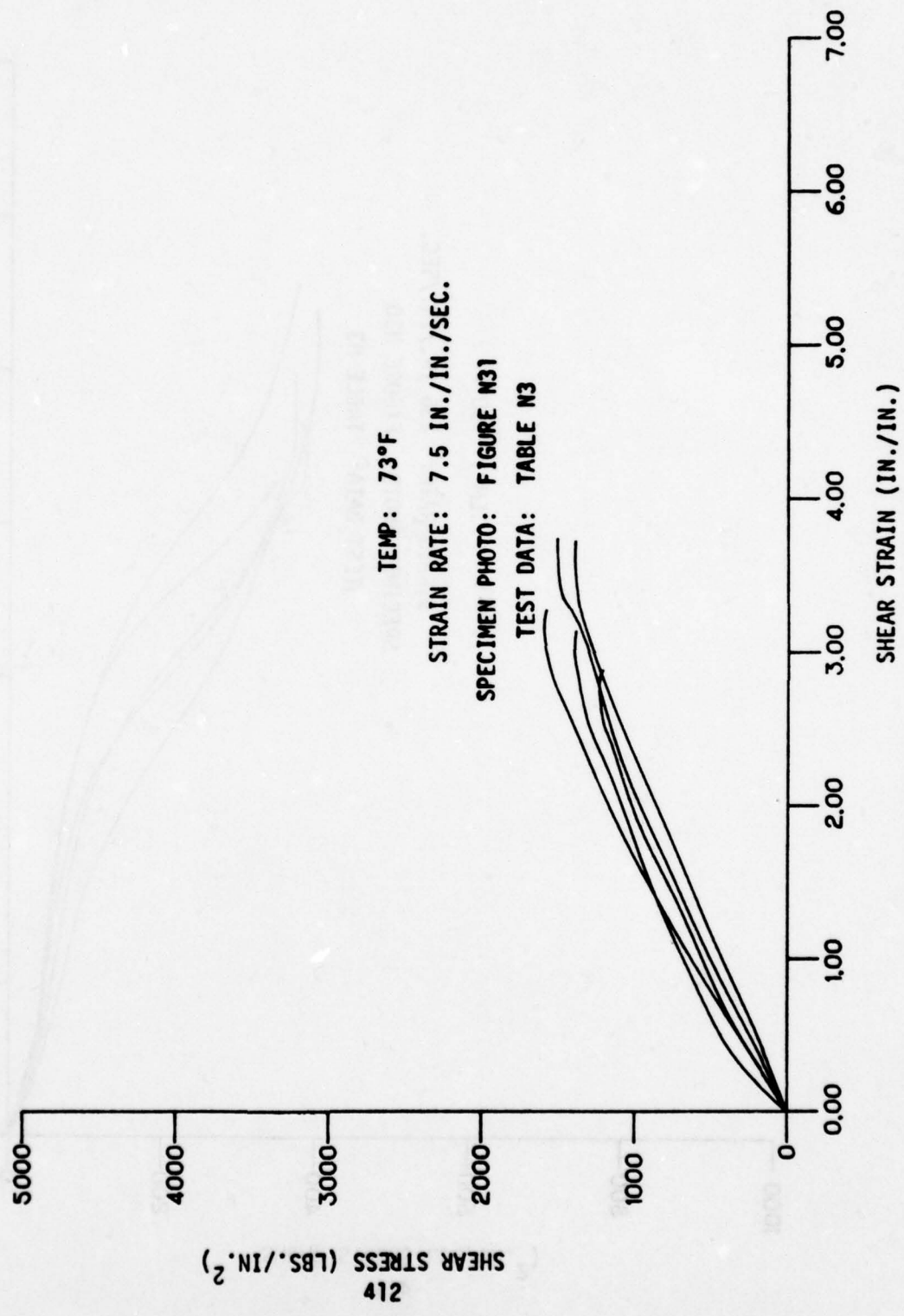


Figure N12. Shear Test Curves (SK625 - 0.03 S130 Interlayer)

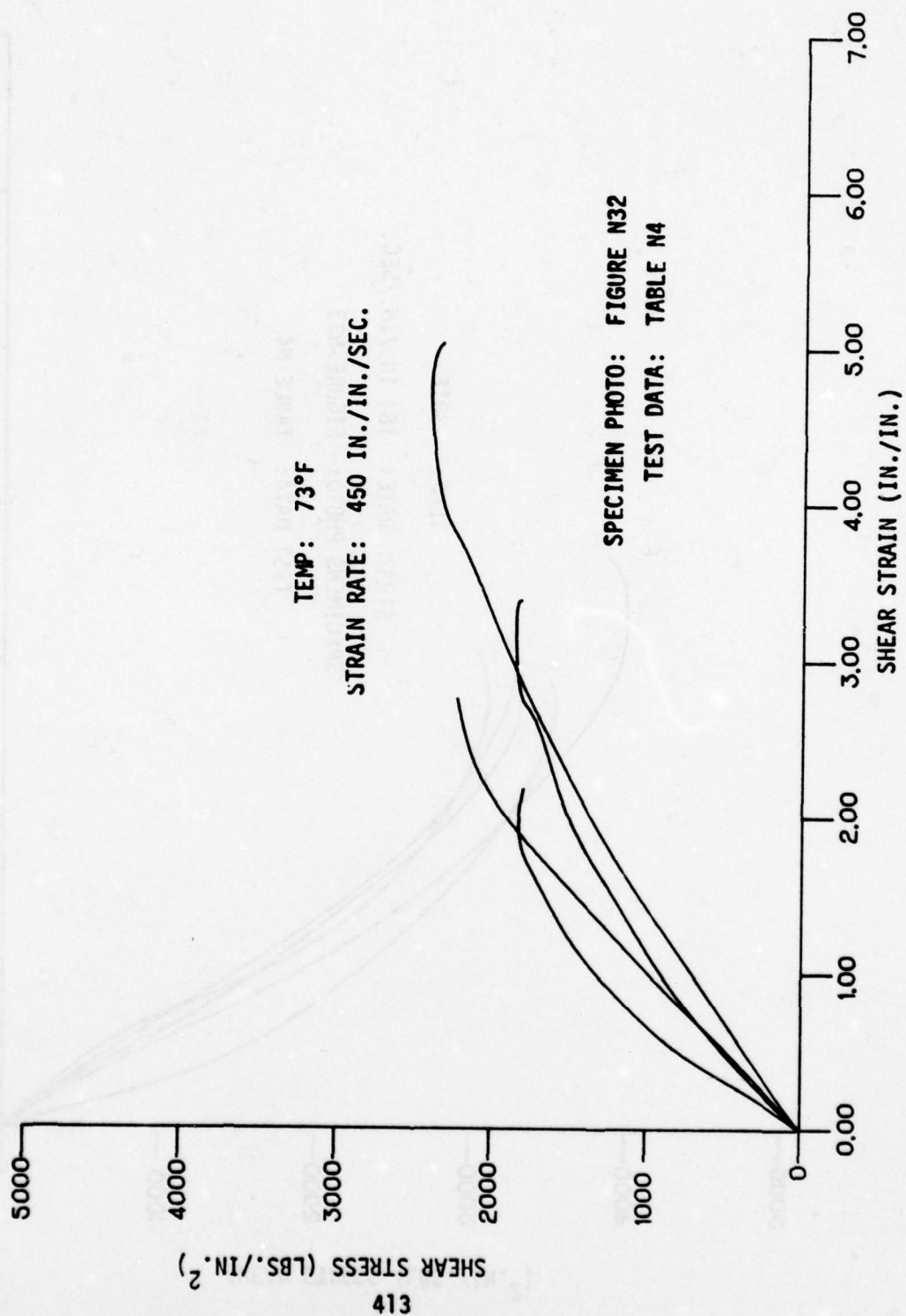


Figure N13. Shear Test Curves (SK625 - 0.03 S130 Interlayer)

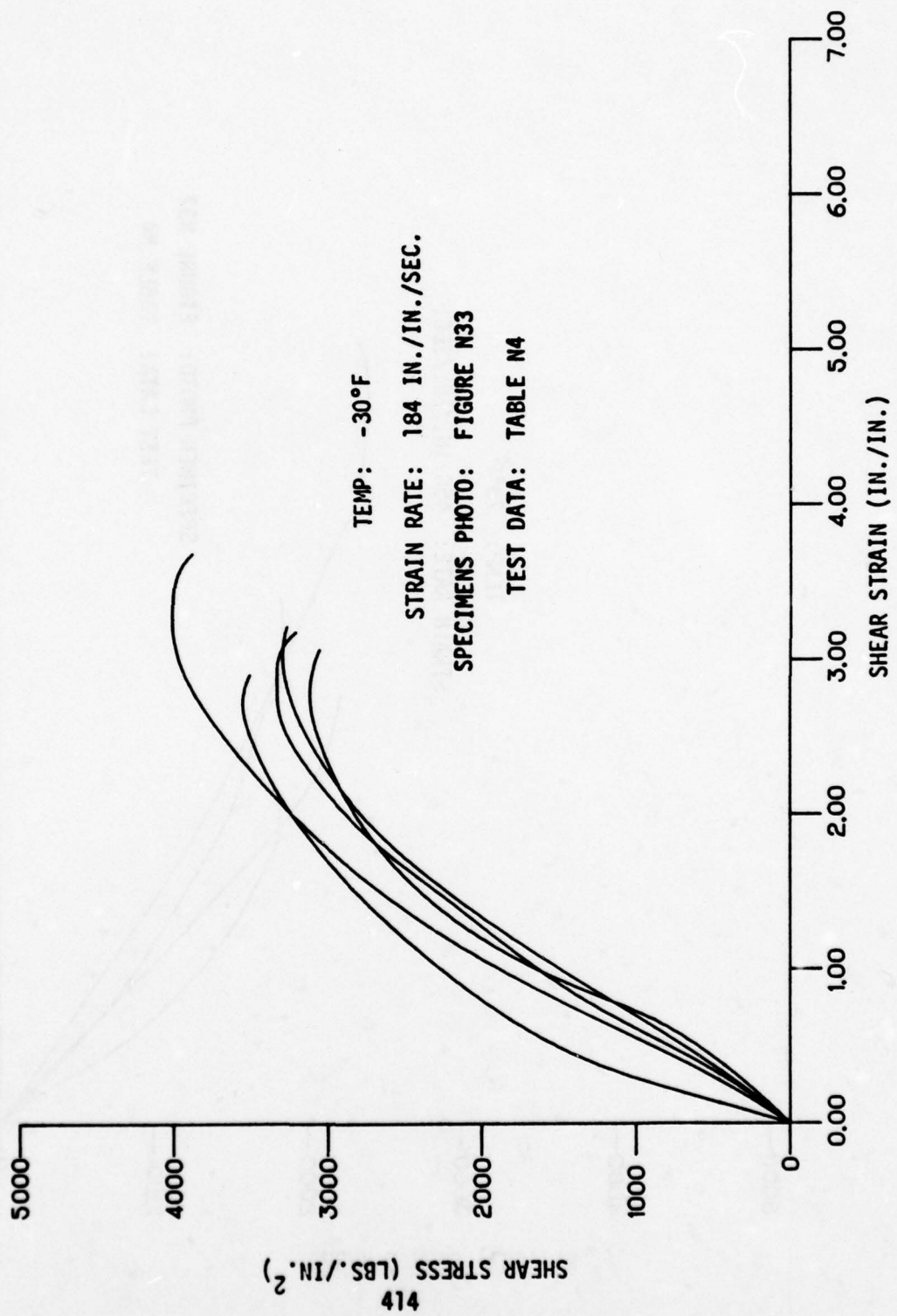


Figure N14. Shear Test Curves (SK625 - 0.03 S130 Interlayer)

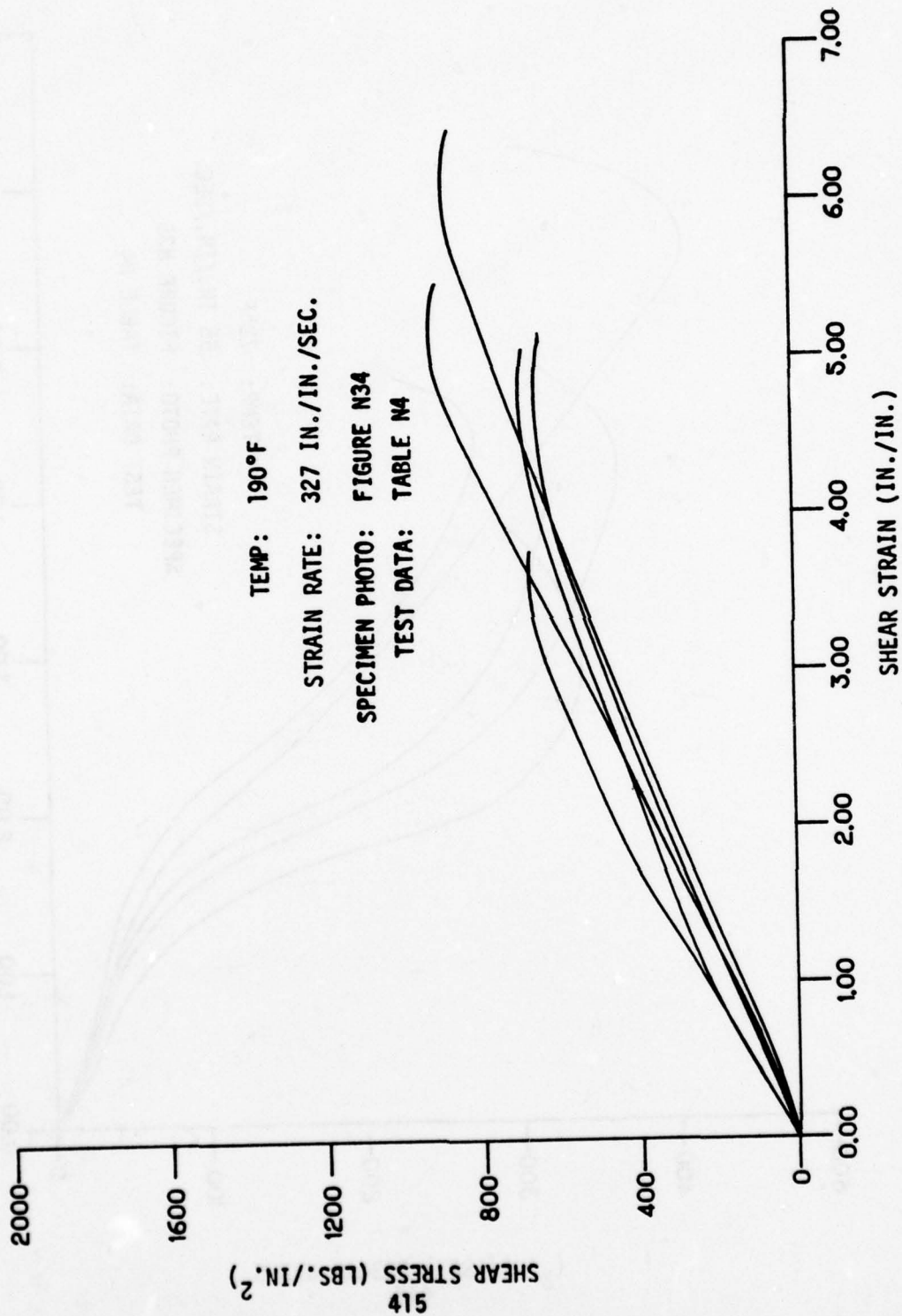


Figure N15 . Shear Test Curves (SK625 - 0.03 S130 Interlayer)

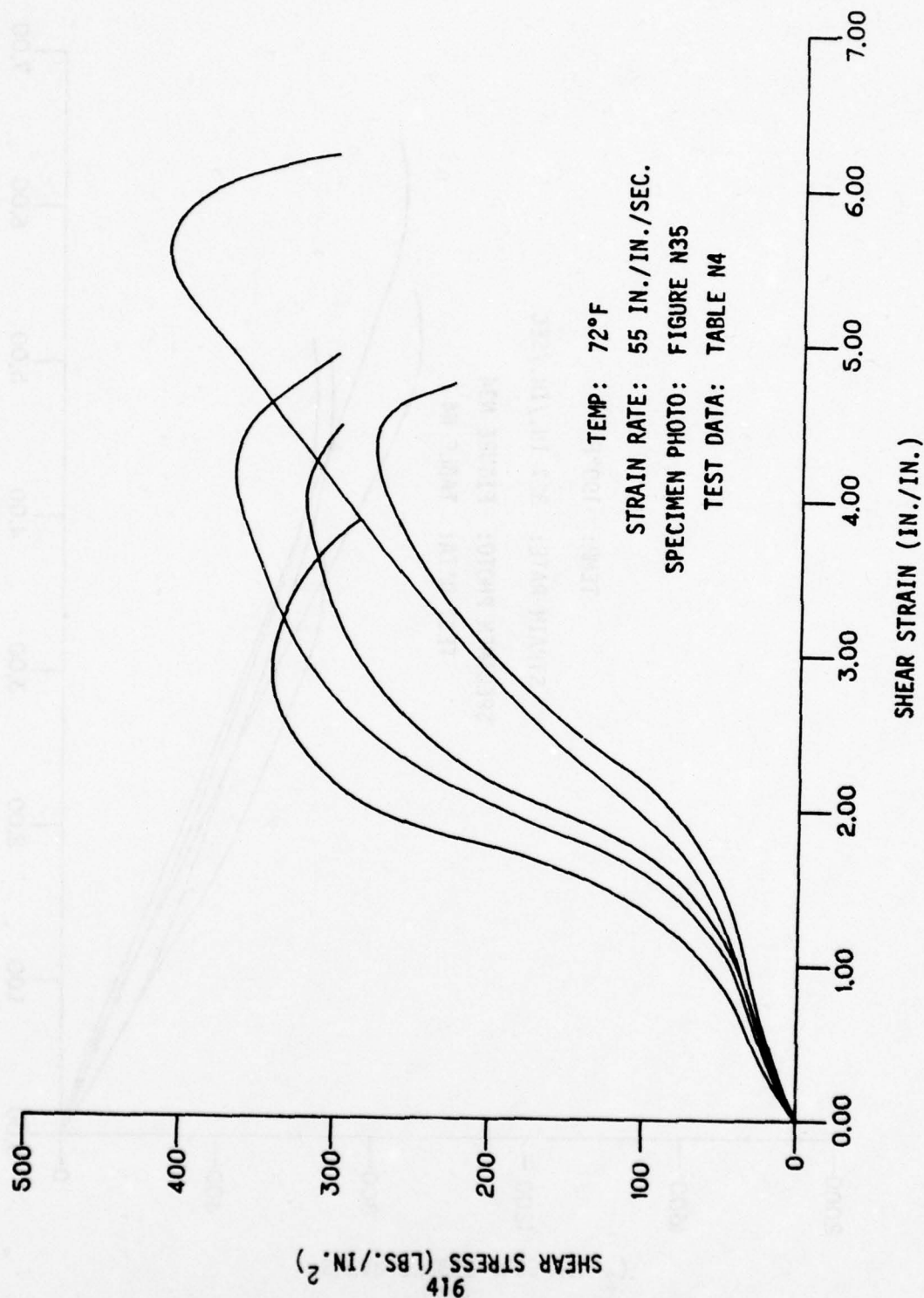


Figure N16. Shear Test Curves [SWU 521 -- 0.12 SS5272Y (HT) Interlayer].

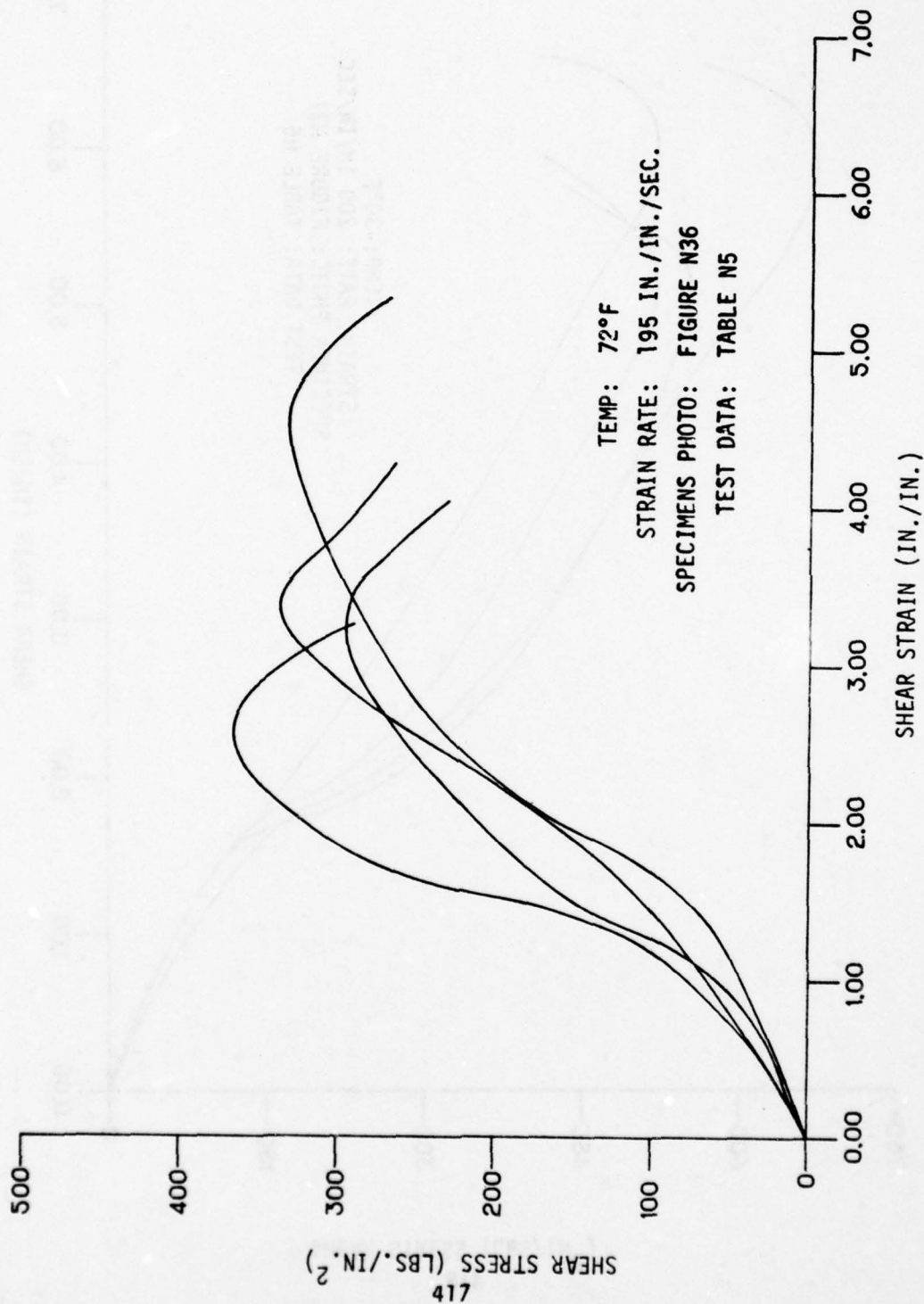


Figure N17. Shear Test Curve [SWU 521 -- 0.12 SS5272Y(HT) Interlayer]

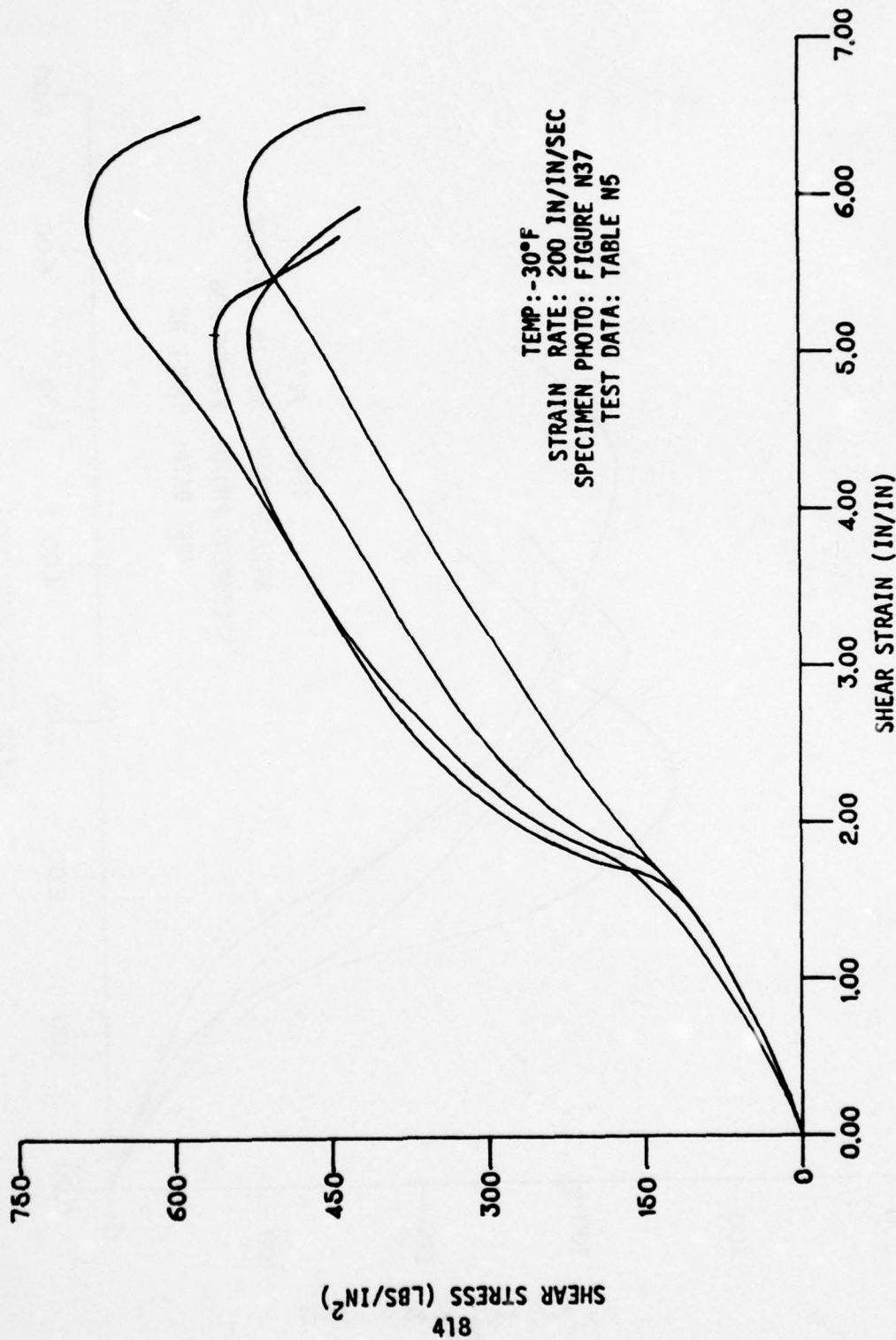


Figure N18 . Shear Test Curves (SWU521-0.12 SS5272Y (HT) Interlayer)

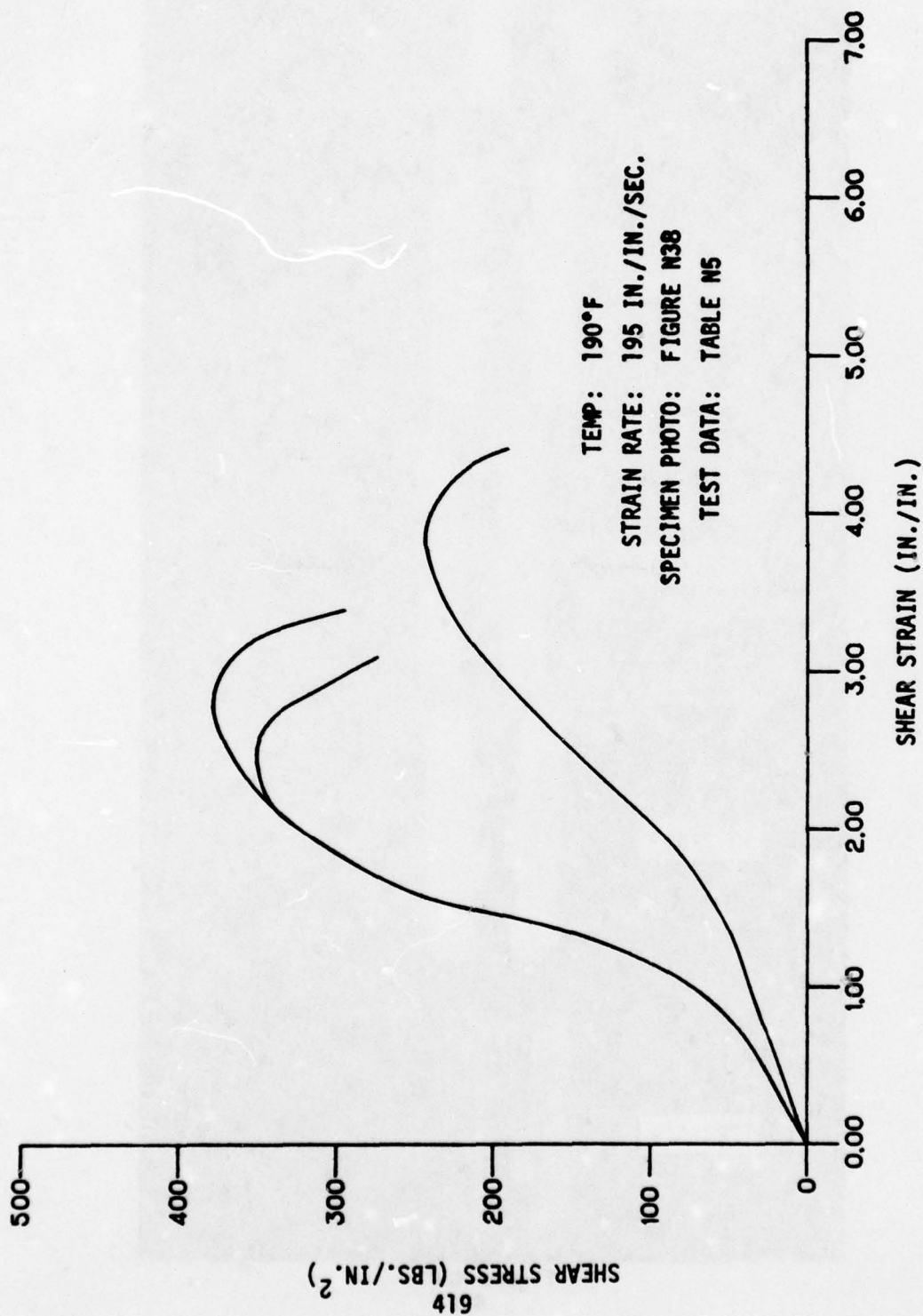


Figure N19 Shear Test Curves [SWU 52] -- 0.12SS5272Y (HT) Interlayer].

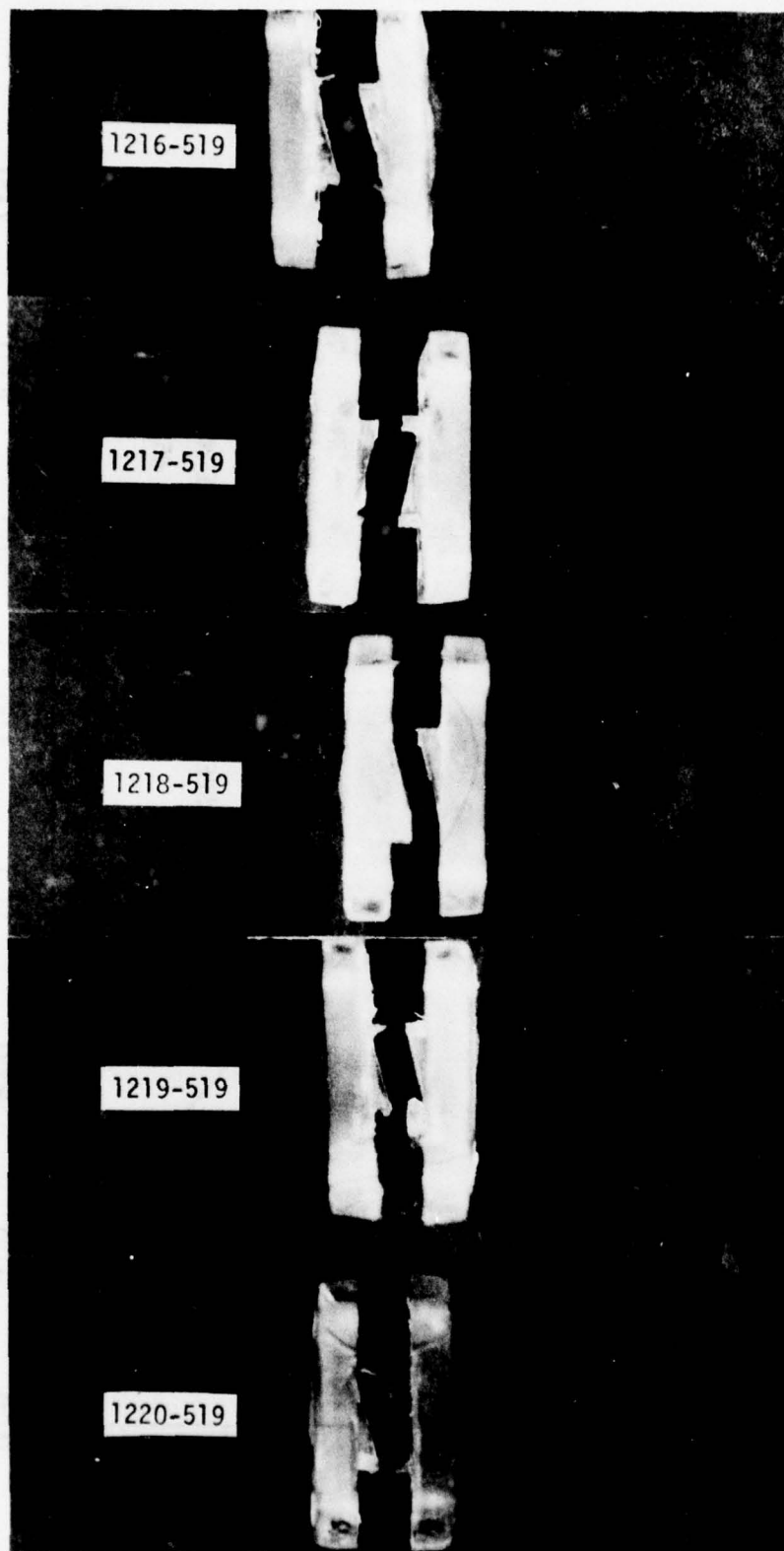


Figure N20.
420

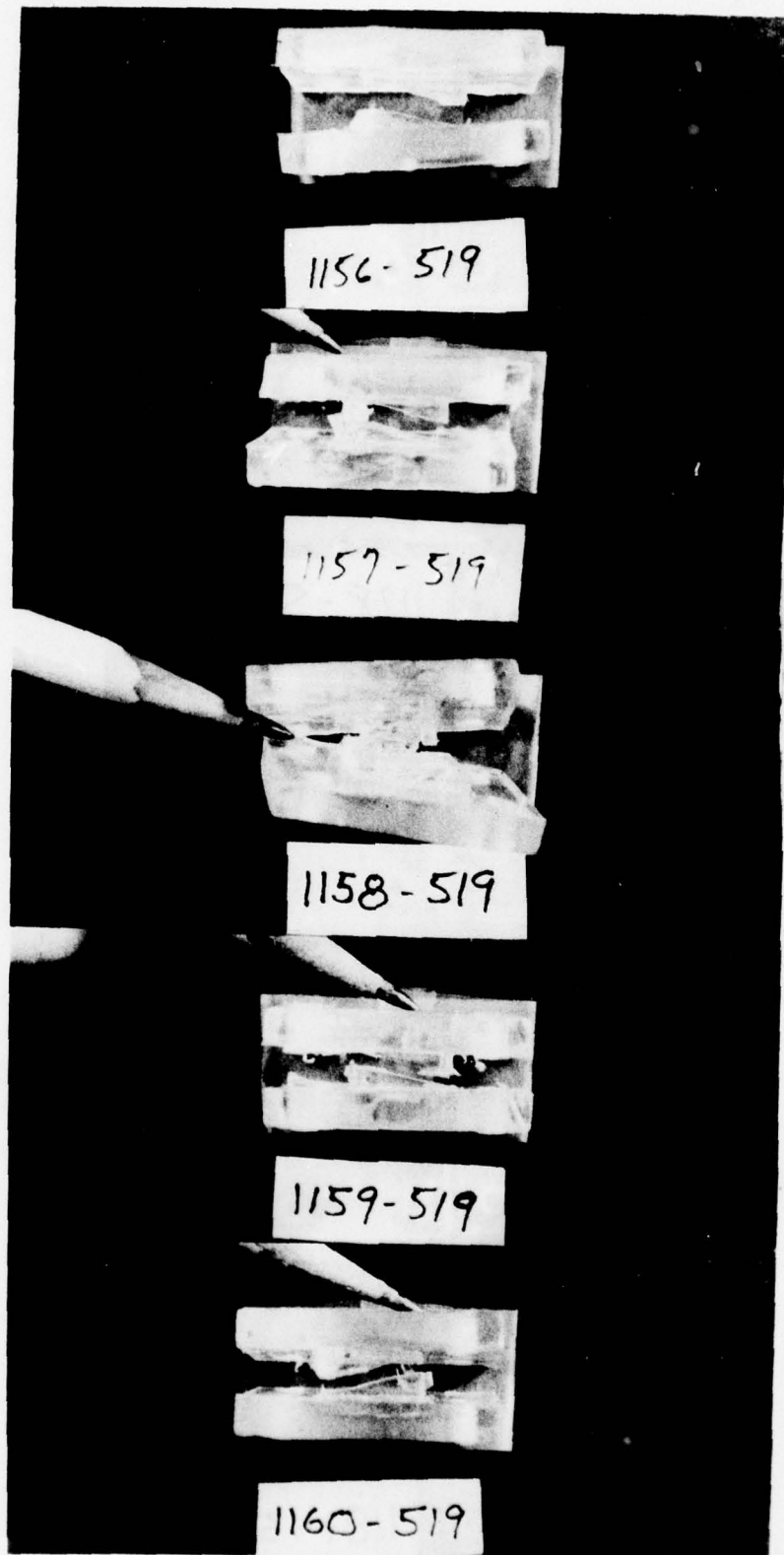


Figure N21.
421

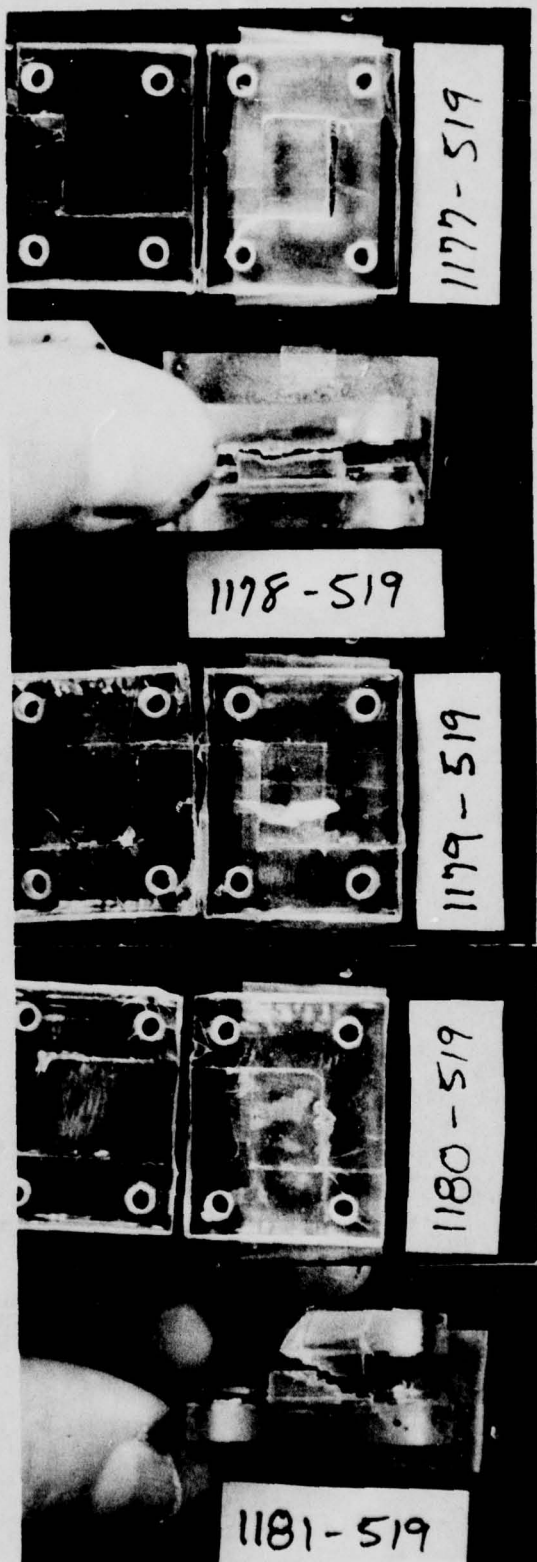


Figure N22.

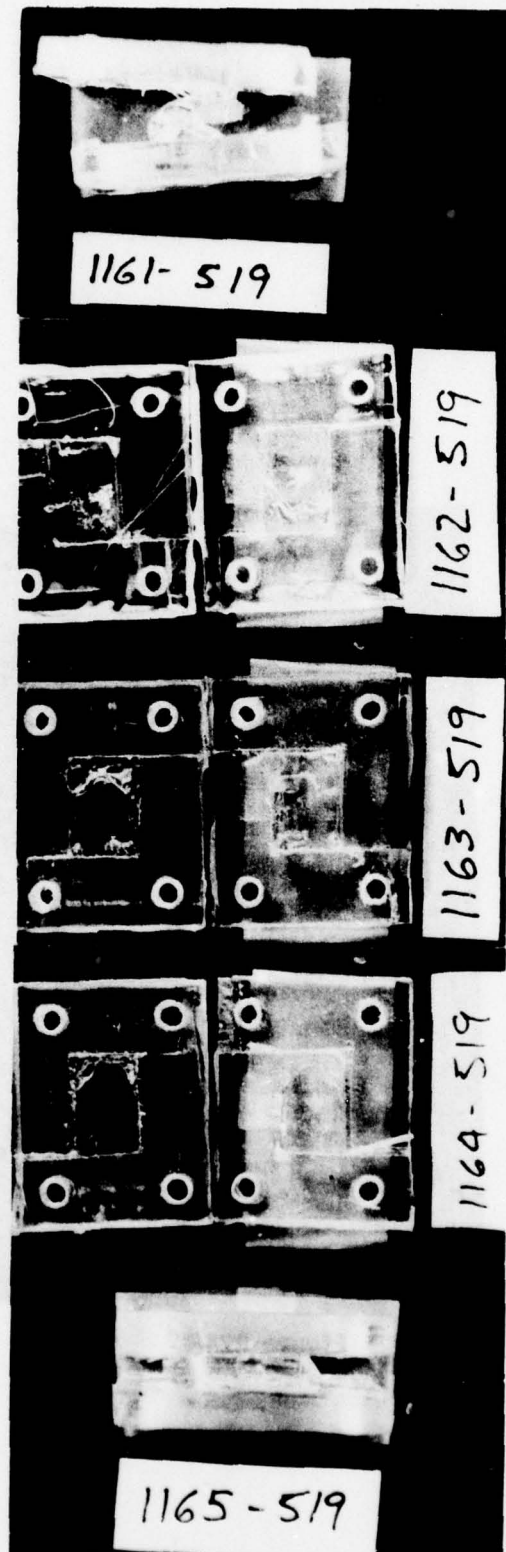


Figure N23.
423

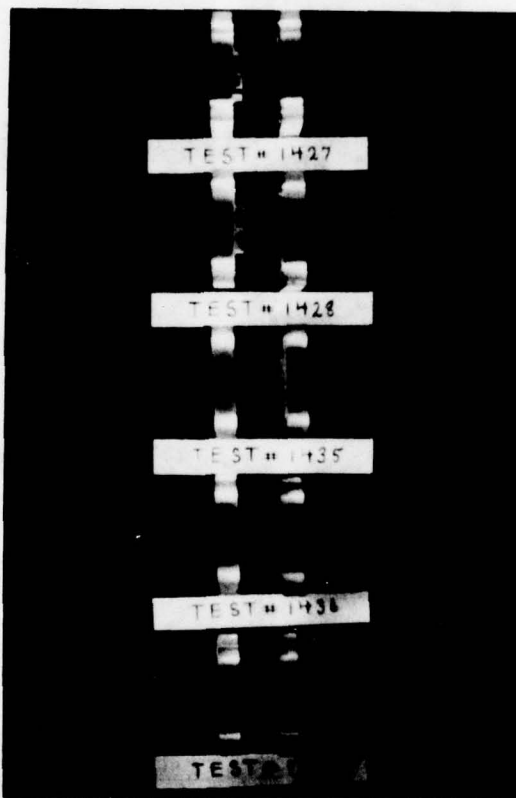


Figure N24.

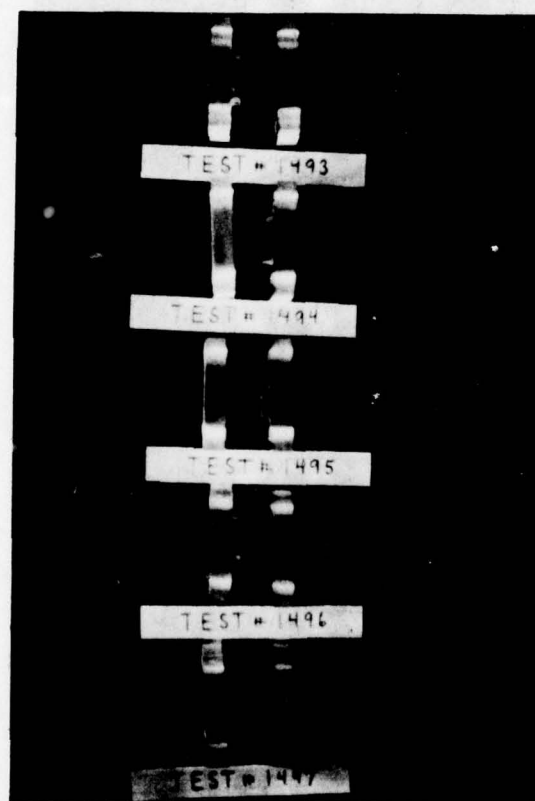


Figure N25.

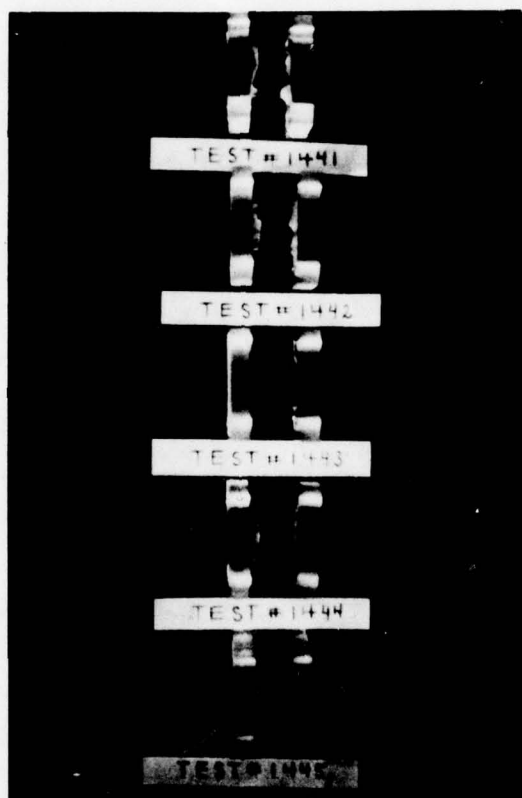


Figure N26.

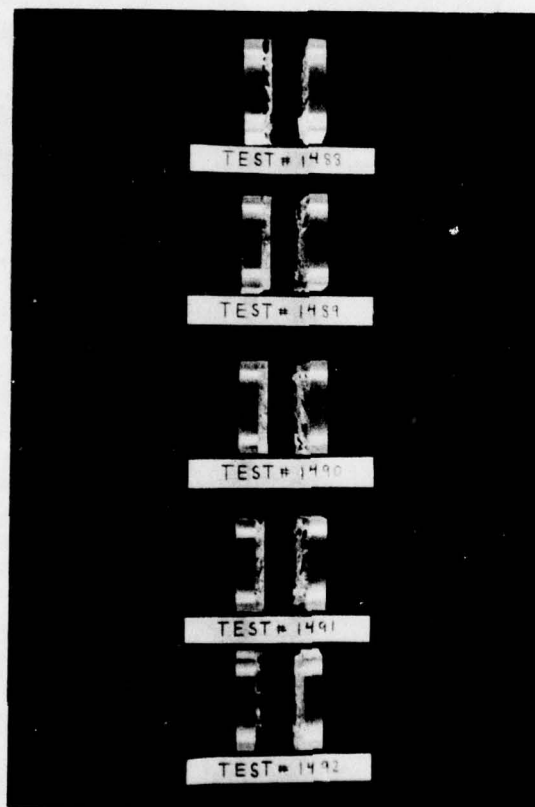


Figure N27.

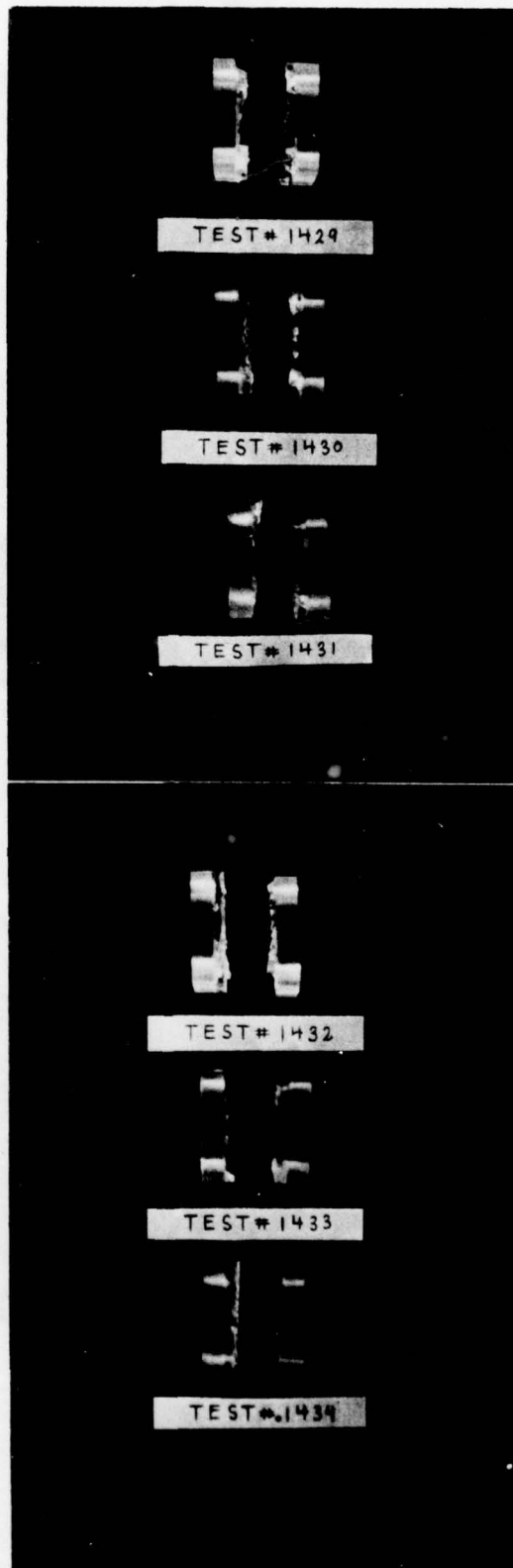


Figure N28.
428

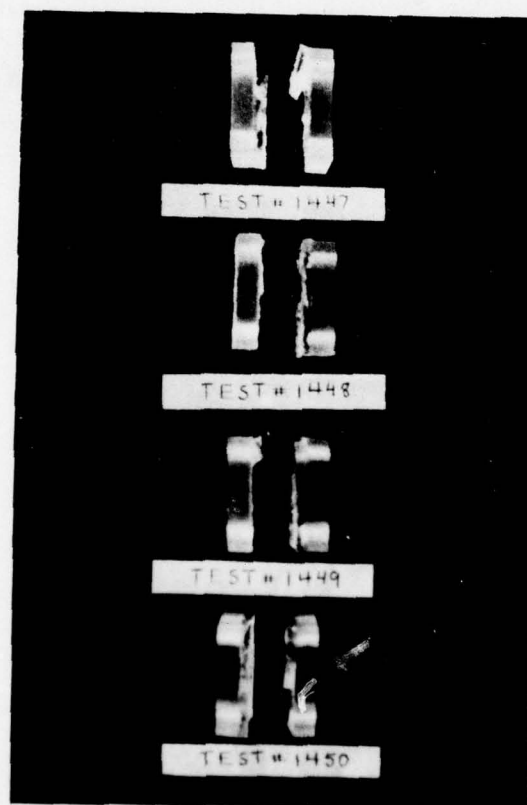


Figure N29.

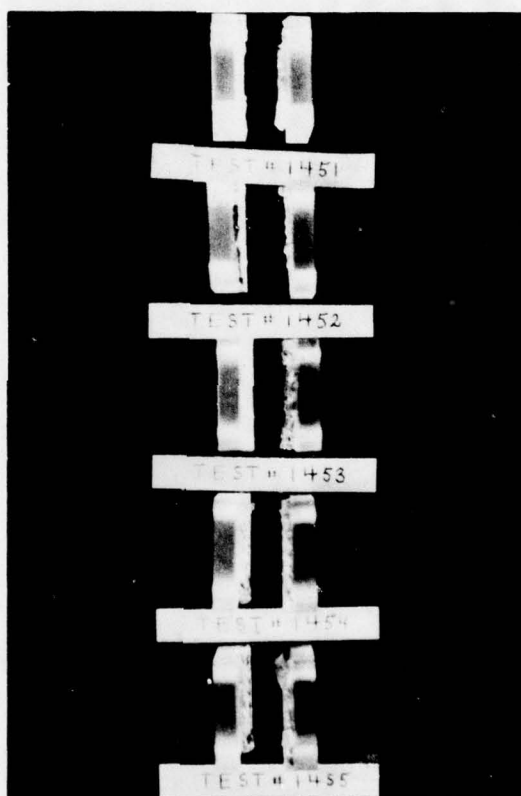


Figure N30.

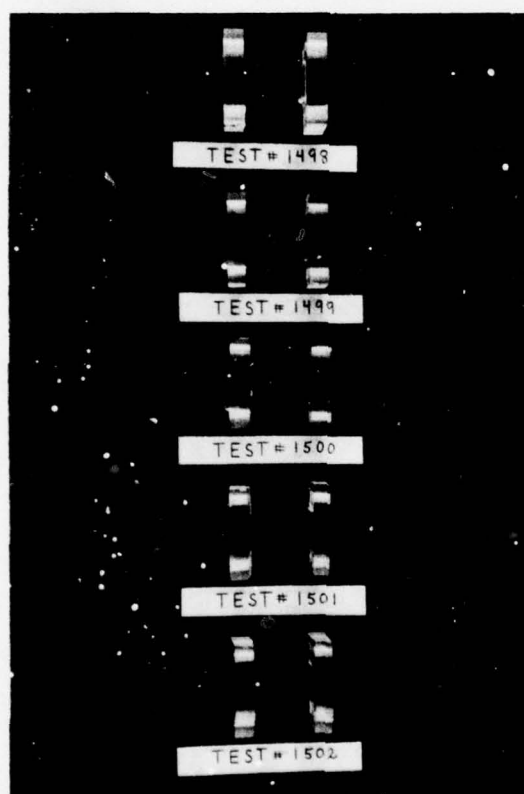


Figure N31.

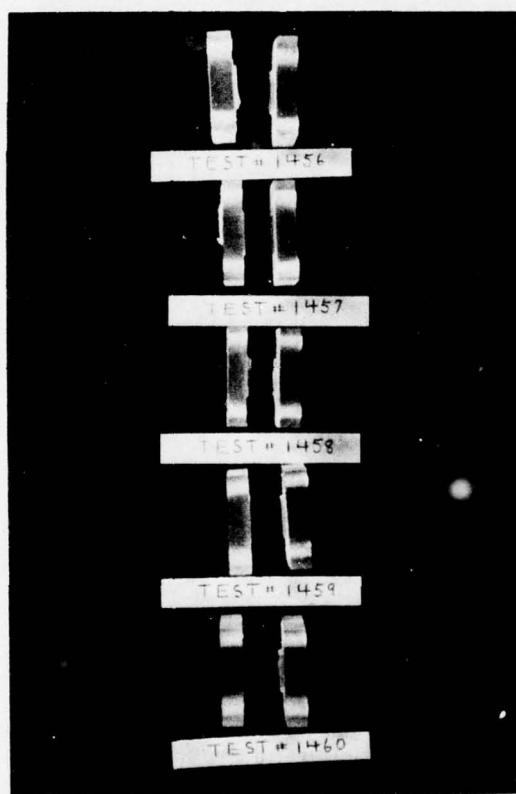


Figure N32.

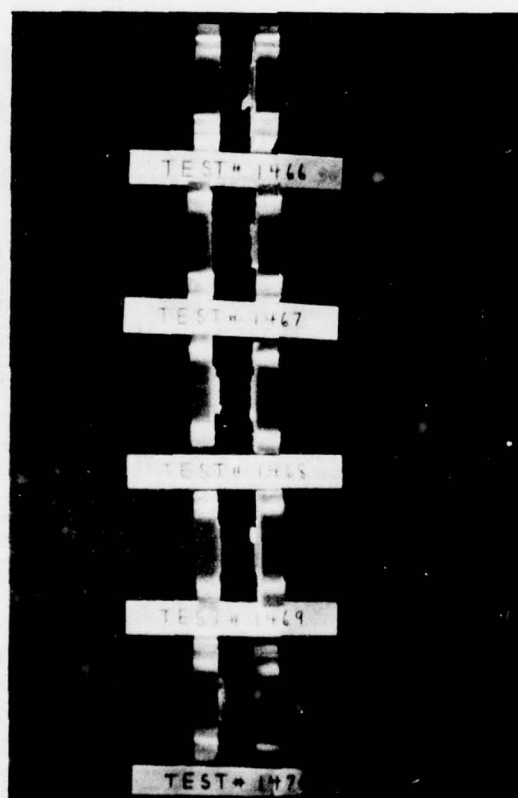


Figure N33.

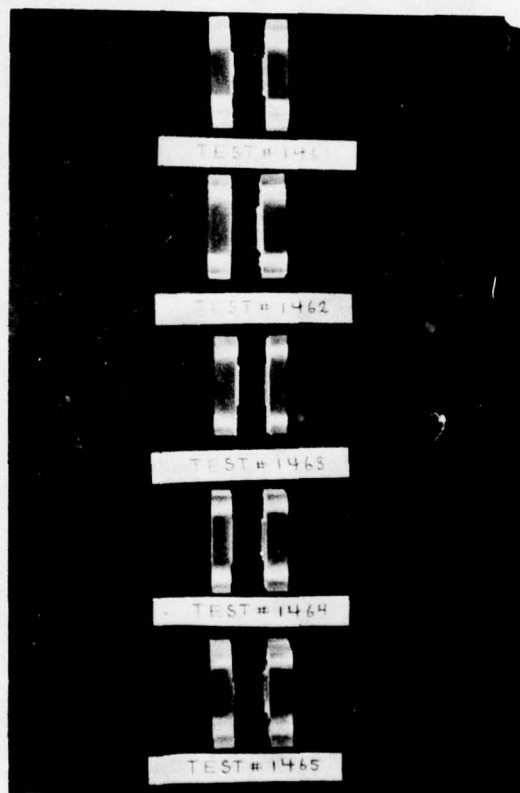


Figure N34.

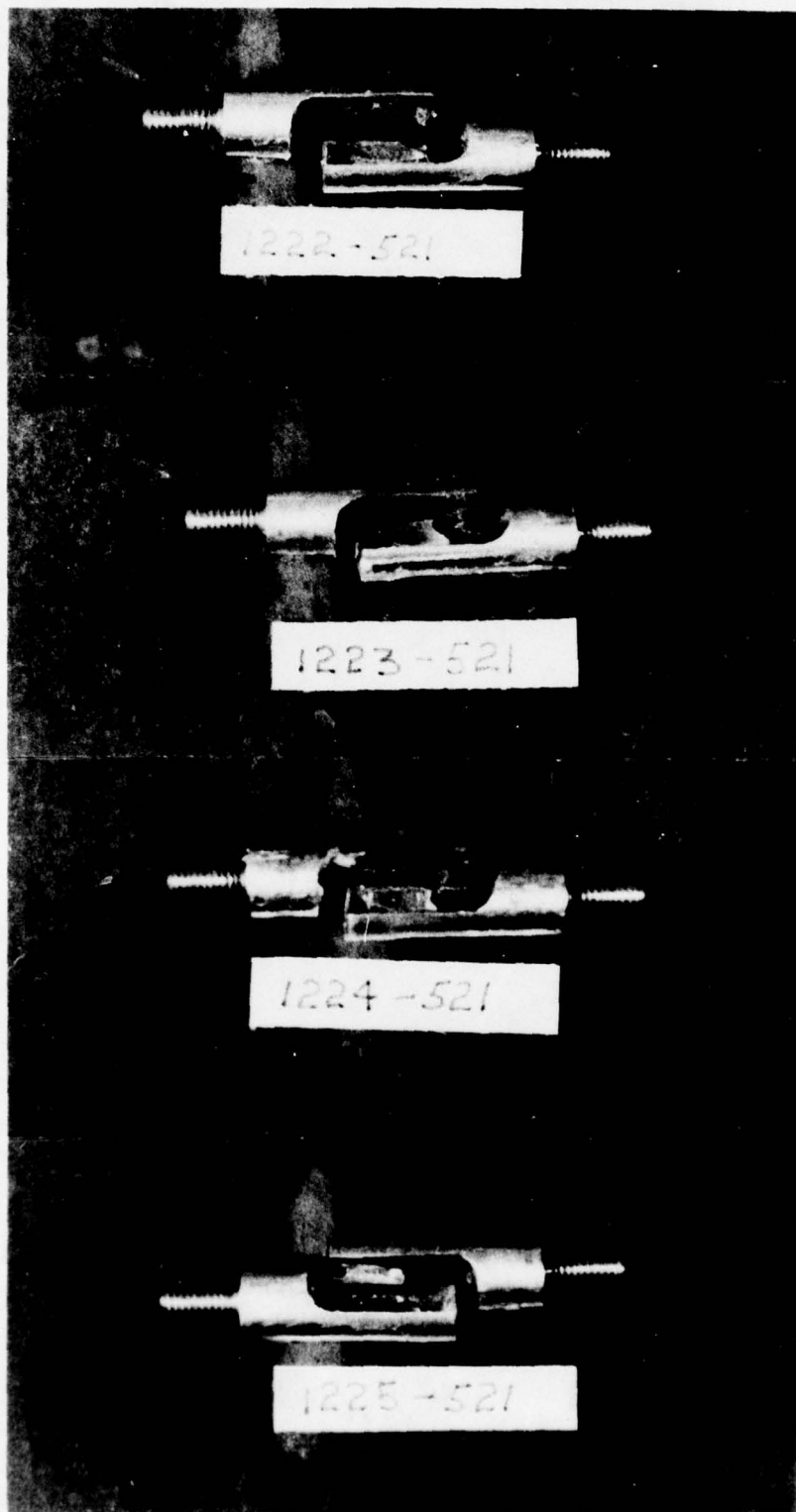


Figure N35.
435

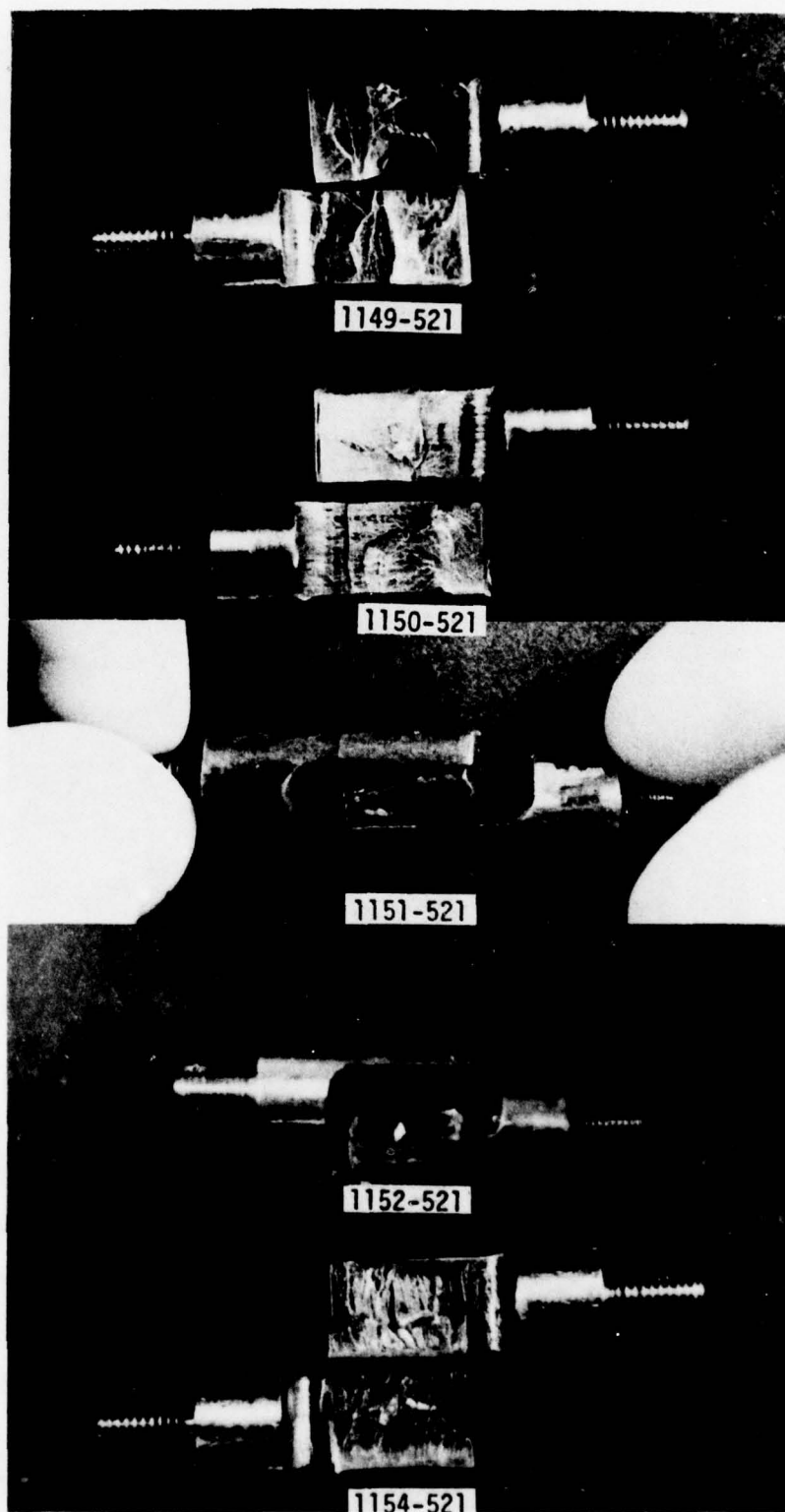


Figure N36.
436

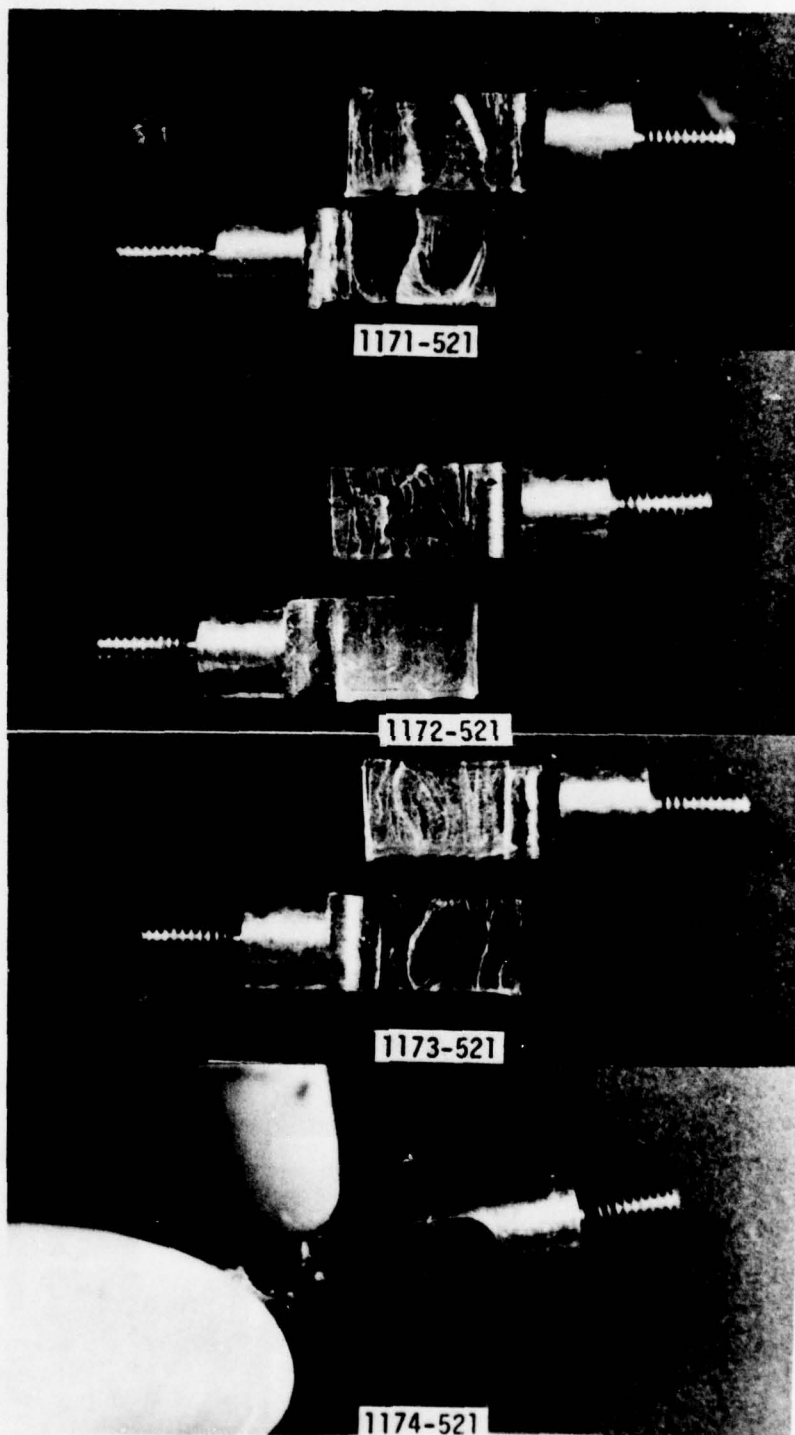


Figure N37.
437

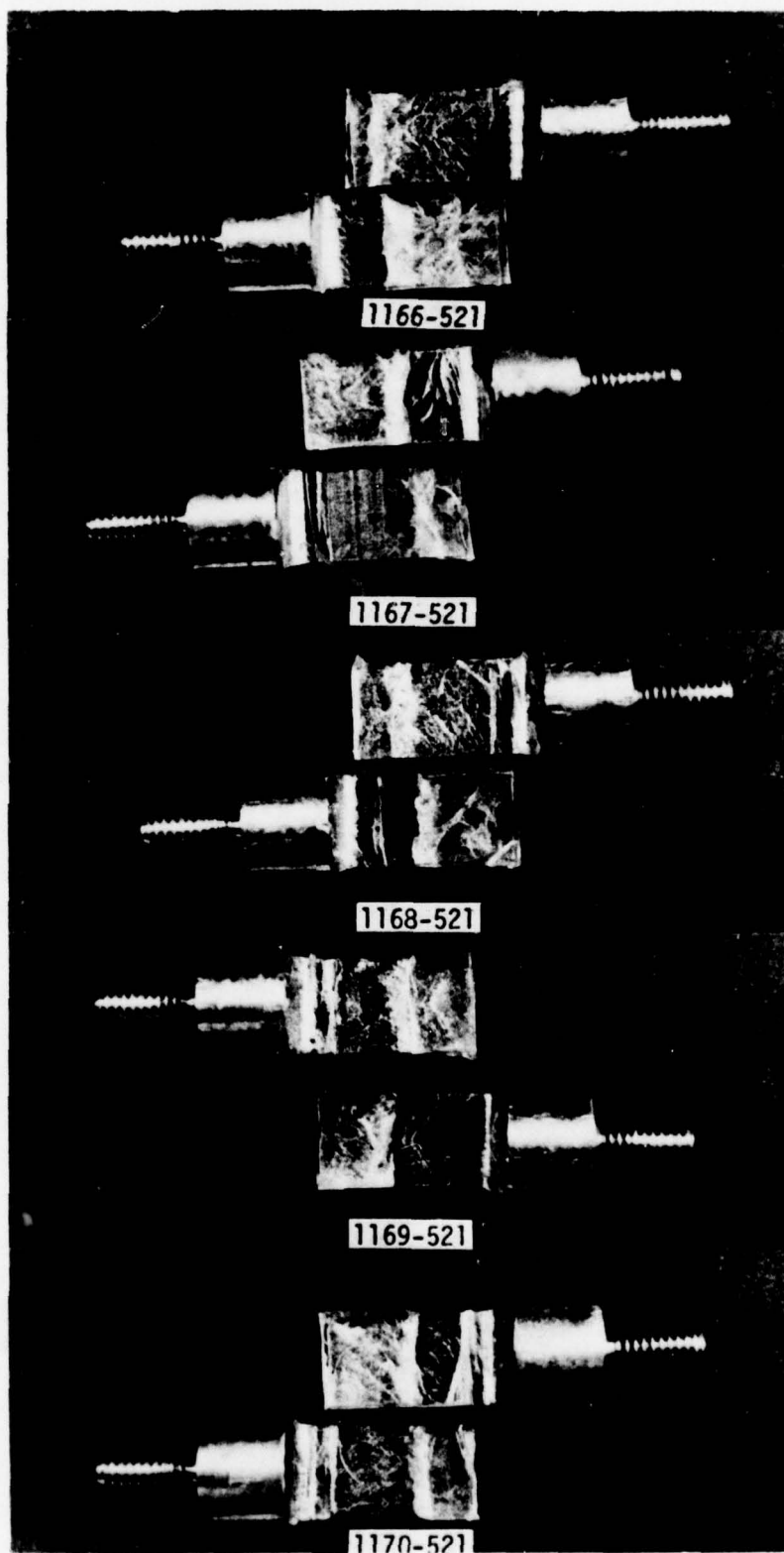


Figure N38.
438

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```

ex clst(stsstr) 'd1(ppg51916) 1(takssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 ****
TEKSSC,CHG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
  SHEAR=1,COMP=2,SHORT TENSION=2
?
1
  ENTER NUMBER OF DATA FILES
?
1
  DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
  (1=YES,2=NO)
?
2
  X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 100
  TEST SPECIMENS-      MAX STRESS  STRAIN AT MAX STRESS
    1 PPG519-1216      2678.      4.090
    2 PPG519-1217      2865.      4.163
    3 PPG519-1218      2832.      4.384
    4 PPG519-1219      2917.      4.213
    5 PPG519-1220      2746.      4.183
  MAX STRAIN ON CURVE  3 OF 5= 5.131
      AVG      A      B      C
PC NO. RADIANS  G  RADIANS  G  RADIANS  G  RADIANS  G
    2  0.377 1072.  0.377 319.  0.377 625.  0.377 790.
    4  0.753 1070.  0.753 734.  0.753 871.  0.753 945.
    6  1.005 1206.  1.005 821.  1.005 977.  1.005 1062.
    8  1.147 1429.  1.147 923.  1.147 1129.  1.147 1239.
      STD DEV      AVG      A      B      C
  MAX STRESS      = 95.650 2802.876 2056.293 2452.827 2583.292
  STRAIN AT MAX STRESS = 0.109 4.207 3.581 3.835 3.972
  STRAIN AT 2ND PT ON BASE CURVE= 0.165
      STRAIN  STD DEV      AVG      A      B      C
  SHEAR MODULUS AT 0.165 87. 1037. 665. 816. 898.
  CHECK ON CALC-SHEAR MODULUS ON TEST CURVES= 1041. DELTA STRAIN= 0.0035

```

Figure N39. Computer Run - PPG519.

```

ex clst(stsstr) 'd1(ppg51956) 1(tekssc)'
**** LOAD MODULI RELOCATION FACTOR = 0.4560 ****
TERESC,CHG 20,10-13-77; J.F.LURKE X37544
FOR SILEX AND COMPRESSION CURVES ONLY.
SILEX=1,COMP=2,SHORT TENSION=2
?
1
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
.1 100
TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
1 PPG519-1156      2780.      5.222
2 PPG519-1157      2724.      5.258
3 PPG519-1158      2596.      4.746
4 PPG519-1159      2538.      4.449
5 PPG519-1160      2649.      4.896
MAX STRAIN ON CURVE 1 OF 5= 5.821
NOT NORMAL STRAIN SSTRESS DCRT DCAC 1 1.000 0.0
0.1660 109. 0.3370 0.3474
0.2523 164. 0.3370 0.3616
0.3370 218. 0.3370 0.3682
0.4219 271. 0.3370 0.3530
NOT NORMAL STRAIN SSTRESS DCRT DCAC 7 1.000 0.0
4.2398 2513. 0.3370 0.3826
AVG A B C
PC NO. RADIANS G RADIANS G RADIANS G RADIANS G
2 0.845 323. 0.845 678. 0.845 737. 0.845 766.
4 1.194 1285. 1.194 1204. 1.194 1237. 1.194 1255.
6 1.321 1790. 1.321 1626. 1.321 1693. 1.321 1729.
8 1.376 1928. 1.376 1544. 1.376 1700. 1.376 1784.
STD DEV AVG A B C
MAX STRESS = 96.802 2644.238 1679.700 2144.845 2423.388
STRAIN AT MAX STRESS = 0.338 4.914 2.971 3.761 4.186
STRAIN AT 2ND PT ON BASE CURVE= 0.507
STRAIN STD DEV AVG A B C
SHEAR MODULUS AT 0.507 24. 779. 646. 700. 729.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 779. DELTA STRAIN= 0.0096

```

Figure N40. Computer Run - PPG519.

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1:1st:stater: d1:ppg51977: g1:77623.d0211.f09001: a(ppg51977):
1:1: LOAD MODULE RELOCATION FACTOR = 0AF618 XXXXXXXX
TELESEC,CHG 208, 2-16-76; J.F.BURKE X37544
PC-4 SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=2

ENTER NUMBER OF DATA FILES

DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

1000
TEST SPECIMENS-
1 PPG519-1177 MAX STRESS 3923. STRAIN AT MAX STRESS 1.269
2 PPG519-1179 3513. 0.652
3 PPG519-1180 3302. 0.729
4 PPG519-1181 3803. 0.991
MAX STRAIN ON CURVE 1 OF 4= 1.269
NOT NORMAL STRAIN SSTRESS DCRIT DCAC 7 1.000 0.0
1.1437 3803. 0.3810 0.3818
AUG A B C
PC NO. RADIANS G RADIANS G RADIANS G RADIANS G
2 0.253 4843. 0.253 -2320. 0.253 609. 0.253 2180.
4 0.638 5274. 0.638 869. 0.638 2670. 0.638 3636.
6 0.803 4581. 0.803 2246. 0.803 3201. 0.803 3713.
STD DEV AUG A B C
MAX STRESS = 294.052 3592.851 0.0 0.0 254.765
STRAIN AT MAX STRESS = 0.280 0.910 0.0 0.0 0.178
STRAIN AT 2ND PT ON BASE CURVE= 0.259
SHEAR MODULUS AT 0.259 2543. 7061. -4201. 404. 2274.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 6787. DELTA STRAIN= 0.0031

Figure N41. Computer Run - PPG519.

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ex clst(stsstr) 'd1(ppg51961) 1(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 ****
KLASSC,CLG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
  SHEAR=1,COMP=2,SHORT TENSION=2
?
1
  ENTER NUMBER OF DATA FILES
?
1
  DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
  (1=YES,2=NO)
?
2
  X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 100
  TEST SPECIMENS-      MAX STRESS  STRAIN AT MAX STRESS
    1 PPG519-1161      737.      4.638
    2 PPG519-1163      492.      5.279
    3 PPG519-1164      704.      4.716
    4 PPG519-1165      575.      5.215
MAX STRAIN ON CURVE  1 OF  4=  6.467
      AVG      A      B      C
PC NO.  RADIANS  G  RADIANS  G  RADIANS  G  RADIANS  G
    2   1.053   328.  1.053  -126.  1.053   60.  1.053   160.
    4   1.312   445.  1.312  -167.  1.312   83.  1.312   217.
    6   1.384   453.  1.384  -127.  1.384  110.  1.384   238.
      STD DEV      AVG      A      B      C
MAX STRESS      =  113.969  626.402   0.0  105.301  295.961
STRAIN AT MAX STRESS =  0.332   4.962   0.0   3.580   4.093
STRAIN AT 2ND PT ON LAST CURVE= 0.835
      STRAIN  STD DEV      AVG      A      B      C
SHEAR MODULUS AT 0.835      65.   340.  -107.   76.   174.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES=  340. DELTA STRAIN= 0.0140

```

Figure N42. Computer Run - PPG519.

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```
ex clst(stsstr) 'd1(sk51927) g(e77623.d02111feg010) 1(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 ****
IFASSC,CHG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=2
```

```
?
1
? ENTER NUMBER OF DATA FILES
1
? DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
  (1=YES, 2=NO)
2
```

```
X-SCALE Y-SCALE TO CORRECT GIPPER DIGITISED DATA
```

```
?
1 100
```

TEST SPECIMENS-	MAX STRESS	STRAIN AT MAX STRESS
1 SK510-1427	1191.	3.078
2 SK510-1428	1066.	4.845
3 SK510-1435	1157.	2.436
4 SK510-1436	2002.	4.321
5 SK510-1437	1368.	3.090

MAX STRAIN ON CURVE	2 OF	5=	4.845
NOT NORMAL	STRAIN	SSTRESS	DCPIT DCAC
	0.0756	50.	0.3370 0.3971
NOT NORMAL	STRAIN	SSTRESS	DCPIT DCAC
	0.0368	25.	0.3370 0.4381
	0.0756	50.	0.3370 0.3971
	0.1163	75.	0.3370 0.3461
NOT NORMAL	STRAIN	SSTRESS	DCPIT DCAC
	0.0182	12.	0.3370 0.4555
	0.0368	25.	0.3370 0.4381
	0.0560	37.	0.3370 0.4188
	0.0756	50.	0.3370 0.3971
	0.0957	62.	0.3370 0.3729
	0.1163	75.	0.3370 0.3461
NOT NORMAL	STRAIN	SSTRESS	DCPIT DCAC
	0.1163	75.	0.3370 0.3461
NOT NORMAL	STRAIN	SSTRESS	DCPIT DCAC
	2.6835	1125.	0.3370 0.3495
NOT NORMAL	STRAIN	SSTRESS	DCPIT DCAC
	2.6835	1125.	0.3370 0.3495
	2.7379	1156.	0.3370 0.3631
NOT NORMAL	STRAIN	SSTRESS	DCPIT DCAC
	3.9024	1368.	0.3370 0.3838
NOT NORMAL	STRAIN	SSTRESS	DCPIT DCAC
	3.9024	1368.	0.3370 0.3838
	4.0248	1398.	0.3370 0.3912
	4.1416	1468.	0.3370 0.3664
	4.2544	1538.	0.3370 0.3441

PC NO.	RADIANS	G	PADIANS	G	RADIANS	G	RADIANS	G
2	0.517	485.	0.517	-82.	0.517	141.	0.517	261.
4	0.922	450.	0.922	-70.	0.922	141.	0.922	255.
6	1.138	468.	1.138	-353.	1.138	62.	1.138	246.
8	1.238	445.	1.238	-293.	1.238	170.	1.238	419.

STD DEV

MAX STRESS	STRAIN AT MAX STRESS	STRAIN AT 2ND PT ON BASE CURVE= 0.569	SHEAR MODULUS AT 0.569	CHECK ON CALC-MEAN MODULUS ON TEST CURVES=
735.048	1302.583	0.967	154.	354.
1302.583	3.734	0.967	355.	354.

DELTA STRAIN= 0.0037

Figure N43. Computer Run - SK519.

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ex clst(stsstr) 'd1(sk51994) g(e77623-d0211.feg012) 1(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 ****
TEKSSC,CHG 20,10-13-77; J.F.BUPKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
  Snsr=1,COMP=2,SHORT TENSION=2
?
1
  ENTER NUMBER OF DATA FILES
?
1
  DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
  (1=YES,2=NO)
?
2
  A-SCALE 1-SCALE TO CORRECT GERBER DIGITISED DATA
?
.01 1
  TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
    1 SK519-1404      463.      1.722
    2 SK519-1405      402.      1.401
    3 SK519-1406      402.      1.444
    4 SK519-1407      464.      1.444
  STRAIN AT FRACTURE POINT IS NOT NORMAL
  MAX STRAIN ON CURVE 1 OF 4= 1.722
      AVG      A      B      C
PC NO.  RADIANS  G  RADIANS  G  RADIANS  G  RADIANS  G
    2  0.478  448.  0.478  152.  0.478  273.  0.478  338.
    4  0.082  459.  0.082  186.  0.082  207.  0.082  356.
      STD DEV      AVG      A      B      C
  MAX STRESS      = 37.847  450.825  142.661  263.642  327.300
  STRAIN AT MAX STRESS = 0.117  1.547  0.726  1.062  1.242
  STRAIN AT 2ND PT ON BASE CURVE= 0.217
      STRAIN  STD DEV      AVG      A      B      C
  SHEAR MODULUS AT 0.217      39.  437.  174.  292.  334.
  CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 430. DELTA STRAIN= 0.0040

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Figure N44. Computer Run - SK519.

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ex clst(stsstr) 'd1(sk51943) g(e77423.d0241.feg011) l(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 ****
TEKSSC, Chu 20, 10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
Shear=1, COMP=2, SHORT TENSION=2
?
1
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
(1=YES, 2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 100
TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
1 SK519-1443          301.      3.037
2 SK519-1444          355.      3.261
3 SK519-1445          400.      2.856
MAX STRAIN ON CURVE 2 OF 3= 3.261
AVG
PC NO. RADIANS      G      RADIANS      G      RADIANS      G      RADIANS      G
2 0.338 352. 0.338 -230. 0.338 7. 0.338 130.
4 0.775 254. 0.775 -130. 0.775 30. 0.775 116.
6 1.034 266. 1.034 -56. 1.034 87. 1.034 163.
8 1.225 304. 1.225 80. 1.225 173. 1.225 223.
STD DEV
MAX STRESS = 23.000 380.735 0.0 127.705 257.005
STRAIN AT MAX STRESS = 0.203 3.051 0.0 1.802 2.270
STRAIN AT END PT ON BASE CURVE= 0.104
STRAIN STD DEV
SHEAR MODULUS AT 0.104 70. 337. 286. 307. 311.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 342. DELTA STRAIN= 0.0018

```

Figure N45. Computer Run - SK519.

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ex clst(stsstr) 'dl(sk60388) g(e77623.d0211.feg021) l(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0B5568 *****
TEKSSC,CHG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
  SHEAR=1,COMP=2,SHORT TENSION=2
?
1
  ENTER NUMBER OF DATA FILES
?
1
  DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
  (1=YES,2=NO)
?
2
  X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 100
  TEST SPECIMENS-      MAX STRESS  STRAIN AT MAX STRESS
    1 SK603-1488      377.      2.721
    2 SK603-1489      372.      2.600
    3 SK603-1490      377.      2.456
    4 SK603-1491      383.      2.495
    5 SK603-1492      367.      2.450
MAX STRAIN ON CURVE 1 OF 5= 2.853
      AVG
PC NO. RADIANS  G  RADIANS  G  RADIANS  G  RADIANS  G
    2  0.768  90.  0.768  -22.  0.768  23.  0.768  48.
    4  1.044  239.  1.044  19.  1.044  108.  1.044  157.
    6  1.166  312.  1.166  250.  1.166  275.  1.166  289.
    8  1.218  308.  1.218  279.  1.218  291.  1.218  297.
      STD DEV      AVG
MAX STRESS      =  6.154  373.908  116.894  270.947  328.399
STRAIN AT MAX STRESS =  0.115  2.544  1.881  2.151  2.296
STRAIN AT 2ND PT ON BASE CURVE= 0.517
      STRAIN  STD DEV      AVG      A      B      C
SHEAR MODULUS AT 0.517  20.  88.  -9.  30.  51.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 87. DELTA STRAIN= 0.0076

```

Figure N46. Computer Run - SK603.

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FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=2

?
1

ENTER NUMBER OF DATA FILES

?
1

DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)

?
2

X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA

?
1 100

TEST SPECIMENS-	MAX STRESS	STRAIN AT MAX STRESS
1 SK603-1429	460.	4.014
2 SK603-1430	448.	5.918
3 SK603-1431	474.	5.502
4 SK603-1432	496.	5.181
5 SK603-1433	484.	4.737
6 SK603-1434	481.	3.508

MAX STRAIN ON CURVE 2 OF 6= 5.918

NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	
	0.2214	22.	0.3190	0.3380	1 1.000 0.0
	0.2819	27.	0.3190	0.3225	
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	3 1.000 0.0
	0.9923	56.	0.3190	0.3295	
	1.1033	58.	0.3190	0.3683	
	1.2131	61.	0.3190	0.3870	
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	4 1.000 0.0
	1.2131	61.	0.3190	0.3870	
	1.3138	66.	0.3190	0.3928	
	1.4125	71.	0.3190	0.3921	
	1.5093	78.	0.3190	0.3864	
	1.6040	70.	0.3190	0.3210	
	1.6040	86.	0.3190	0.3750	
	1.6966	74.	0.3190	0.3286	
	1.6966	97.	0.3190	0.3567	
	1.7869	79.	0.3190	0.3355	
	1.7869	111.	0.3190	0.3303	
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	5 1.000 0.0
	1.7869	79.	0.3190	0.3355	
	1.7869	111.	0.3190	0.3303	
	1.9140	88.	0.3190	0.3448	
	2.0361	99.	0.3190	0.3512	
	2.1534	112.	0.3190	0.3550	
	2.2657	126.	0.3190	0.3522	
	2.3731	142.	0.3190	0.3450	
	2.4754	157.	0.3190	0.3364	
NOT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	6 1.000 0.0
	2.4754	157.	0.3190	0.3364	
	2.5950	176.	0.3190	0.3248	

PC NO.	RADIANS	AVG	G	RADIANS	A	G	RADIANS	B	G	RADIANS	C	G
2	0.509	83.	0.509	5.	0.509	37.	0.509	54.				
4	1.061	104.	1.061	-232.	1.061	-96.	1.061	-22.				
6	1.260	235.	1.260	-155.	1.260	4.	1.260	89.				
8	1.333	310.	1.333	126.	1.333	201.	1.333	241.				

MAX STRESS	STD DEV	AVG	A	B	C
MAX STRESS	= 17.279	445.987	0.0	19.348	103.745
STRAIN AT MAX STRESS	= 0.914	4.810	0.0	0.653	3.078
STRAIN AT 2ND PT ON BASE CURVE= 0.344					
SHEAR MODULUS AT 0.344	13.	64.	15.	35.	46.

CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 64. DELTA STRAIN= 0.0032

Figure N47. Computer Run - SK603.
447

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ex clst(stsstr) 'd1(sk60347) g(e77623.d0211.feg022) 1(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0B5560 *****
TEKSSC,CBG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
  SHEAR=1,COMP=2,SHORT TENSION=2
?
1
  ENTER NUMBER OF DATA FILES
?
1
  DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
  (1=YES,2=NO)
?
2
  X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 100
  TEST SPECIMENS-          MAX STRESS   STRAIN AT MAX STRESS
    1 SK603-1448             597.       3.525
    2 SK603-1447             563.       3.893
MAX STRAIN ON CURVE      2 OF      2=      3.976
      AVG
PC NO.  RADIANS  G    RADIANS  G    RADIANS  G    RADIANS  G
    2    0.938   128.   0.938  -1562.   0.938  -810.   0.938  -408.
    4    1.139   293.   1.139  -2082.   1.139  -1025.   1.139  -460.
    6    1.267   414.   1.267   -931.   1.267  -332.   1.267   -12.
    8    1.319   440.   1.319   -227.   1.319    70.   1.319   228.
      STD DEV          AVG
MAX STRESS           =   23.721   575.163   0.0   0.0   0.0
STRAIN AT MAX STRESS =    0.260   3.709   0.0   0.0   0.0
STRAIN AT 2ND PT ON BASE CURVE= 1.117
      STRAIN  STD DEV          AVG          A          B          C
SHEAR MODULUS AT 1.117    103.    232.   -3607.   -1890.   -985.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 232. DELTA STRAIN= 0.0041

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Figure N48. Computer Run - SK603.

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ex clst(stsstr) 'd1(sk60351) g(e77623.d0211.
INJ56706I ENDING QUOTE ASSUMED, 'd1(sk60351) g(e77623.d0211.
READY
ex clst(stsstr) 'd1(sk60351) g(e77623.d0211.feg014) 1(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = JAF560 *****
TENSOC,CHG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
  SHEAR=1,COMP=2,SHORT TENSION=2
?
1
  ENTER NUMBER OF DATA FILES
?
1
  DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
  (1=YES,2=NO)
?
2
  X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 100
  TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
    1 SK603-1451      347.      2.133
    2 SK603-1452      376.      2.780
    3 SK603-1453      372.      2.322
    4 SK603-1454      386.      2.218
    5 SK603-1455      400.      2.496
MAX STRAIN ON CURVE 2 OF 5= 2.780
  NOT NORMAL STRAIN SSTRESS DCRIT DCAC 1 1.000 1.0
    0.0411 5. J.3370 0.3403
      AVG A B C
PC NO. RADIANS G RADIANS G RADIANS G RADIANS G
    2 0.301 130. 0.301 17. 0.301 63. 0.301 87.
    4 0.742 109. 0.742 -59. 0.742 3. 0.742 42.
    6 0.880 134. 0.880 -124. 0.880 -19. 0.880 38.
    8 1.113 288. 1.113 57. 1.113 151. 1.113 231.
      STD DEV AVG A B C
MAX STRESS = 19.778 366.476 6.244 21.371 143.123
STRAIN AT MAX STRESS = J.257 2.393 0.344 0.379 1.937
STRAIN AT 2ND PT ON BASE CURVE= 0.245
      STRAIN STD DEV AVG A B C
SHEAR MODULUS AT 0.245 11. 125. 109. 116. 119.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 125. DELTA STRAIN= 0.0010

```

Figure N50. Computer Run - SK603.

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ex clst(stsstr) 'd1(sk62598) g(e77623.d0211.feg011) l(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 *****
TEKSSC,CHG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
  SHEAR=1,COMP=2,SHORT TENSION=2
?
1
  ENTER NUMBER OF DATA FILES
?
1
  DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
  (1=YES,2=NO)
?
2
  X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 100
  TEST SPECIMENS-      MAX STRESS   STRAIN AT MAX STRESS
    1 SK625-1498      1505.        3.655
    2 SK625-1499      1390.        3.603
    3 SK625-1500      1394.        3.014
    4 SK625-1501      1594.        3.143
    5 SK625-1502      1229.        2.759
MAX STRAIN ON CURVE   1 OF 5= 3.736
      AVG
PC NO. RADIANS   G   RADIANS   G   RADIANS   G   RADIANS   G
    2  0.780   713.  0.780  -25.  0.780   275.  0.780   437.
    4  1.186  1020.  1.186   434.  1.186   672.  1.186   800.
    6  1.296  1096.  1.296   491.  1.296   737.  1.296   870.
      STD DEV      AVG      A      B      C
MAX STRESS      = 137.250 1392.971  0.0  582.204  926.211
STRAIN AT MAX STRESS = 0.386  3.235  0.0  1.920  2.405
STRAIN AT 2ND PT ON BASE CURVE= 0.333
      STRAIN   STD DEV      AVG      A      B      C
SHEAR MODULUS AT 0.333  158.  664.  -118.  200.  311.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 666. DELTA STRAIN= 0.0106

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Figure N51. Computer Run - SK625.

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```

ex clst#stsstr) 'd1(sk62556) g(e77623.d0211.feg013) l(tekssc)'
*** LOAD MODULE RELOCATION FACTOR = 0AF560 *****
TEKSSC,CHG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
  SHEAR=1,COMP=2,SHORT TENSION=2
?
1
  ENTER NUMBER OF DATA FILES
?
1
  DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
  (1=YES,2=NO)
?
2
  X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 100
  TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
    1 SK625-1456      1827.      1.938
    2 SK625-1457      2227.      2.757
    3 SK625-1458      2406.      4.706
    4 SK625-1459      1850.      3.192
MAX STRAIN ON CURVE 3 OF 4= 5.030
  NOT NORMAL STRAIN SSTRESS DCRIT DCAC 5 1.000 0.0
    2.8329 1828. 0.3810 0.4210
    2.9420 1848. 0.3810 0.4245
      AVG      A      B      C
PC NO. RADIANS G RADIANS G RADIANS G RADIANS G
    2 0.849 1282. 0.849 -940. 0.849 -31. 0.849 456.
    4 1.193 1535. 1.193 107. 1.193 691. 1.193 1004.
    6 1.314 1549. 1.314 327. 1.314 827. 1.314 1095.
    8 1.359 1528. 1.359 48. 1.359 654. 1.359 978.
      STD DEV      AVG      A      B      C
MAX STRESS      = 285.941 1960.947 0.0 3.879 35.219
STRAIN AT MAX STRESS = 1.161 3.148 0.0 0.035 0.109
STRAIN AT 2ND PT ON BASE CURVE= 0.568
      STRAIN STD DEV      AVG      A      B      C
SHEAR MODULUS AT 0.568 294. 1262. -406. 276. 642.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 1273. DELTA STRAIN= 0.0090

```

Figure N52. Computer Run - SK625.

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ex clst(stsstr) 'd1(sk62566) g(e77623.d0211.feg010) 1(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 *****
TEKSSC,CHG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=2

?
1
? ENTER NUMBER OF DATA FILES
? 1
? DO YOU WANT TO DISCARD ANY TEST SPECIMENS, 10 MAX
? (1=YES,2=NO)
2

? X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
1 1000

TEST SPECIMENS-	MAX STRESS	STRAIN AT MAX STRESS
1 SK625-1466	3112.	2.769
2 SK625-1467	3324.	2.891
3 SK625-1468	4001.	3.278
4 SK625-1469	3547.	2.717
5 SK625-1470	3287.	3.019

MAX STRAIN ON CURVE 3 OF 5= 3.681					
NCT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	1 1.000 0.0
	0.0496	76.	0.3370	0.3623	
	0.0981	152.	0.3370	0.3617	
	0.1456	229.	0.3370	0.3610	
	0.1920	307.	0.3370	0.3596	
	0.2374	385.	0.3370	0.3566	
	0.2817	464.	0.3370	0.3517	
NCT NORMAL	STRAIN	SSTRESS	DCRIT	DCAC	2 1.000 0.0
	0.2817	464.	0.3370	0.3517	
	0.3644	617.	0.3370	0.3379	

PC NO.	RADIANS	G	RADIANS	G	RADIANS	G	RADIANS	G
2	0.644	2082.	0.644	-1085.	0.644	203.	0.644	896.
4	1.032	2589.	1.032	1269.	1.032	1806.	1.032	2095.
6	1.198	2796.	1.198	1543.	1.198	2052.	1.198	2327.
8	1.275	2710.	1.275	1166.	1.275	1794.	1.275	2132.

	STD DEV	AVG	A	B	C
MAX STRESS	= 342.743	3440.306	1264.638	2334.559	2758.037
STRAIN AT MAX STRESS	= 0.225	2.935	1.645	2.169	2.452
STRAIN AT 2ND PT ON BASE CURVE= 0.282					
	STRAIN	STD DEV	AVG	A	B
SHEAR MODULUS AT 0.282	800.	1967.	-2438.	-647.	317.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 1962. DELTA STRAIN= 0.0081					

Figure N53. Computer Run - SK625.

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ex clst(stsstr) 'd1(sk62561) g(e77623.d0211.feg012) l(tekssc)'
IKJ56225I DATA SET TSOT2JC.GREEN.DATA ALREADY IN USE, TRY LATER+
READY
ex clst(stsstr) 'd1(sk62561) g(e77623.d0211.feg012) l(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 ****
TEKSSC,CHG 20,10-13-77; J.F.BURKE X37544
FCR SHEAR AND COMPRESSION CURVES ONLY.
  SHEAR=1,COMP=2,SHORT TENSION=2
?
1
  ENTER NUMBER OF DATA FILES
?
1
  DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
  (1=YES,2=NO)
?
2
  X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 100
  TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
    1 SK625-1461      882.      6.086
    2 SK625-1462      694.      4.761
    3 SK625-1463      675.      3.623
    4 SK625-1464      919.      5.154
    5 SK625-1465      654.      4.779
MAX STRAIN ON CURVE 1 OF 5= 6.441
  NOT NORMAL STRAIN SSTRESS DCRIT DCAC 5 1.000 0.0
    4.2671 675. 0.3370 0.3915
    4.4695 690. 0.3370 0.3936
  NOT NORMAL STRAIN SSTRESS DCRIT DCAC 6 1.000 0.0
    4.4695 690. 0.3370 0.3936
    4.5775 706. 0.3370 0.3527
      AVG      A      B      C
PC NO. RADIANS G RADIANS G RADIANS G RADIANS G
    2 0.774 233. 0.774 -60. 0.774 60. 0.774 124.
    4 1.274 448. 1.274 176. 1.274 287. 1.274 346.
    6 1.378 541. 1.378 85. 1.378 270. 1.378 370.
    8 1.405 544. 1.405 32. 1.405 240. 1.405 352.
      STD DEV      AVG      A      B      C
MAX STRESS      = 125.680 735.788 0.0 153.347 393.720
STRAIN AT MAX STRESS = 0.885 4.820 0.0 1.866 2.978
STRAIN AT 2ND PT ON BASE CURVE= 0.413
      STRAIN STD DEV      AVG      A      B      C
SHEAR MODULUS AT 0.413 53. 217. -93. 33. 101.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 216. DELTA STRAIN= 0.0100

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Figure N54. Computer Run - SK625.

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ex clst(stsstr) 'd1(swu521) 1(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 ****
TEKSSC,CHG 20,10-13-77; J.F.EURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=2
?
1
ENTER NUMBER OF DATA FILES
?
1
DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
(1=YES,2=NO)
?
2
X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 100
TEST SPECIMENS-      MAX STRESS      STRAIN AT MAX STRESS
1  SWU521-1221      366.      4.157
2  SWU521-1222      410.      5.579
3  SWU521-1223      341.      2.882
4  SWU521-1224      320.      3.984
5  SWU521-1225      276.      4.326
MAX STRAIN ON CURVE 2 OF 5= 6.217
      AVG      A      B      C
PC NO. RADIANS  G  RADIANS  G  RADIANS  G  RADIANS  G
2  0.383  52.  0.383  -3.  0.383  19.  0.383  31.
4  0.800  55.  0.800  -21.  0.800  10.  0.800  27.
6  0.994  84.  0.994  -103.  0.994  -27.  0.994  14.
8  1.090  136.  1.090  -240.  1.090  -87.  1.090  -5.
      STD DEV      AVG      A      B      C
MAX STRESS      =  50.107  322.334  0.0  13.946  21.842
STRAIN AT MAX STRESS      =  0.962  4.185  0.0  0.764  0.894
STRAIN AT 2ND PT ON BASE CURVE= 0.169
      STRAIN  STD DEV      AVG      A      B      C
SHEAR MODULUS AT 0.169      10.  52.  -4.  19.  31.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 52. DELTA STRAIN= 0.0037

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Figure N55. Computer Run - SWU521.

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ex clst(stsstr) 'a1(swu52149) 1(tekssc)'
**** LOAD MODULE RELOCATION FACTOR = 0AF560 ****
TEKSSC,CHG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
SHEAR=1,COMP=2,SHORT TENSION=2
?
1
  ENTER NUMBER OF DATA FILES
?
1
  DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
  (1=YES,2=NO)
?
2
  X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 100
  TEST SPECIMENS-      MAX STRESS  STRAIN AT MAX STRESS
    1 SWU521-1149      295.      3.223
    2 SWU521-1151      337.      3.367
    3 SWU521-1153      332.      4.525
    4 SWU521-1154      366.      2.568
MAX STRAIN ON CURVE 3 OF 4= 5.324
      AVG      A      B      C
PC NO. RADIANS  G  RADIANS  G  RADIANS  G  RADIANS  G
    2  0.610   62.  0.610  -38.  0.610   3.  0.610   25.
    4  0.920  104.  0.920 -111.  0.920  -23.  0.920   24.
    6  1.038  161.  1.038 -333.  1.038 -131.  1.038  -22.
    8  1.105  192.  1.105 -287.  1.105  -91.  1.105   14.
      STD DEV      AVG      A      B      C
MAX STRESS      = 29.259 322.309 0.0 0.303 26.190
STRAIN AT MAX STRESS = 0.814 3.421 0.0 0.032 1.183
STRAIN AT 2ND PT ON BASE CURVE= 0.455
      STRAIN  STD DEV      AVG      A      B      C
SHEAR MODULUS AT 0.455 18. 66. -58. -7. 20.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES= 67. DELTA STRAIN= 0.0039

```

Figure N56. Computer Run - SWU521.

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X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
1 100
TEST SPECIMENS- MAX STRESS STRAIN AT MAX STRESS
4 SWU521-1170 528. 5.982
5 SWU521-1171 558. 5.085
6 SWU521-1172 526. 5.100
7 SWU521-1173 680. 5.869
MAX STRAIN ON CURVE 1 OF 4= 6.572
NOT NORMAL STRAIN SSSTRESS DCRIT DCAC 1 1.000 0.0
0.2127 11. 0.3810 0.3825
0.2544 13. 0.3810 0.3967
NOT NORMAL STRAIN SSSTRESS DCRIT DCAC 2 1.000 0.0
0.2544 13. 0.3810 0.3967
0.2950 16. 0.3810 0.4086
0.3353 18. 0.3810 0.4183
0.3753 20. 0.3810 0.4149
0.4151 23. 0.3810 0.4118
0.4545 25. 0.3810 0.4107
0.4937 28. 0.3810 0.4117
NOT NORMAL STRAIN SSSTRESS DCRIT DCAC 3 1.000 0.0
0.4937 28. 0.3810 0.4117
0.5394 31. 0.3810 0.4152
0.5847 34. 0.3810 0.4203
0.6295 37. 0.3810 0.4261
0.6740 40. 0.3810 0.4320
0.7180 43. 0.3810 0.4375
0.7616 47. 0.3810 0.4400
NOT NORMAL STRAIN SSSTRESS DCRIT DCAC 4 1.000 0.0
0.7616 47. 0.3810 0.4400
0.8079 50. 0.3810 0.4387
0.8538 54. 0.3810 0.4363
0.8995 58. 0.3810 0.4349
0.9451 61. 0.3810 0.4345
0.9907 65. 0.3810 0.4349
1.0363 69. 0.3810 0.4362
NOT NORMAL STRAIN SSSTRESS DCRIT DCAC 5 1.000 0.0
1.0363 69. 0.3810 0.4362
1.1006 74. 0.3810 0.4345
1.1646 79. 0.3810 0.4320
1.2279 85. 0.3810 0.4293
1.2898 90. 0.3810 0.4269
1.3498 96. 0.3810 0.4250
NOT NORMAL STRAIN SSSTRESS DCRIT DCAC 6 1.000 0.0
1.4071 102. 0.3810 0.4239
1.4071 102. 0.3810 0.4239
1.4294 105. 0.3810 0.4237
1.4513 107. 0.3810 0.4231
1.4727 110. 0.3810 0.4214
1.4938 112. 0.3810 0.4178
1.5146 115. 0.3810 0.4115
1.5352 118. 0.3810 0.4010
NOT NORMAL STRAIN SSSTRESS DCRIT DCAC 7 1.000 0.0
1.5352 118. 0.3810 0.4010
NOT NORMAL STRAIN SSSTRESS DCRIT DCAC 7 0.500 0.0
1.5352 118. 0.3810 0.4010
1.5527 121. 0.3810 0.3874
AVG A B C
PC NO. RADIANS G RADIANS G RADIANS G RADIANS G
2 0.454 64. 0.459 19. 0.459 37. 0.459 47.
4 0.803 90. 0.803 30. 0.803 54. 0.803 68.
6 0.993 124. 0.993 44. 0.993 76. 0.993 94.
8 1.050 156. 1.050 6. 1.050 67. 1.050 100.
STD DEV AVG A B C
MAX STRESS = 72.628 562.653 57.813 144.626 313.650
STRAIN AT MAX STRESS = 0.483 5.509 1.655 3.497 4.244
STRAIN AT 2ND PT ON BASE CURVE = 0.254
SHEAR MODULUS AT 0.254 STRAIN STD DEV AVG A B C
7. 64. 16. 35. 46.
CHECK OF CALC-MEAN MODULUS ON TEST CURVES= 64. DELTA STRAIN= 0.0039

Figure N57. Computer Run - SWU521.

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ex clst(stsstr) 'd1(swu52167) 1(tekssc)'
*** LOAD MODULE RELOCATION FACTOR = 0AF560 *****
TEKSSC,CHG 20,10-13-77; J.F.BURKE X37544
FOR SHEAR AND COMPRESSION CURVES ONLY.
  SHEAR=1,COMP=2,SHORT TENSION=2
?
1
  ENTER NUMBER OF DATA FILES
?
1
  DO YOU WANT TO DISCARD ANY TEST SPECIMENS,10 MAX
  (1=YES,2=NO)
?
1
  INPUT NUMBER TO BE DISCARDED & POSITION NUMBERS ONE AT A TIME
?
4
?
4
?
5
?
6
?
7
?
6
  X-SCALE Y-SCALE TO CORRECT GERBER DIGITISED DATA
?
1 100-
  TEST SPECIMENS-      MAX STRESS  STRAIN AT MAX STRESS
    1 SWU521-1167      378.    2.790
    2 SWU521-1168      243.    3.838
    3 SWU521-1169      350.    2.468
MAX STRAIN ON CURVE 2 OF 3= 4.409
      AVG      A      B      C
PC NO. RADIANS  G  RADIANS  G  RADIANS  G  RADIANS  G
  2  0.322    52.  0.322   -79.  0.322   -24.  0.322    5.
  4  0.7.1    75.  0.771  -190.  0.771   -79.  0.771  -20.
  6  1.006   183.  1.006  -920.  1.006  -461.  1.006  -215.
  8  1.121   228.  1.121 -1017.  1.121  -498.  1.121  -221.
      STD DEV      AVG      A      B      C
MAX STRESS      =  71.387  309.554  0.0  0.0  1.468
STRAIN AT MAX STRESS =  0.716  3.032  0.0  0.0  0.306
STRAIN AT 2ND PT ON BASE CURVE= 0.172
      STRAIN  STD DEV      AVG      A      B      C
SHEAR MODULUS AT 0.172    13.    51.   -80.   -25.    4.
CHECK ON CALC-MEAN MODULUS ON TEST CURVES=  51. DELTA STRAIN= 0.0026

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Figure N58. Computer Run - SWU521.

TABLE N1. SHEAR TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA					TEST CALCULATIONS DATA		
	TEST TEMP (°F)	STRAIN RATE (IN/IN/SEC)	THICKNESS (IN)	SHEAR AREA (IN ²)	MAX. LOAD (LBS)	FAILURE TYPE	RUPTURE STRESS (LBS/IN ²)	RUPTURE STRAIN (IN/IN)
PPG519-1216	72	51	.120	.160	431	SHEAR	2694	4.090
PPG519-1217	72	50	.120	.160	455	SHEAR	2844	4.163
PPG519-1218	72	54	.120	.160	454	SHEAR	2838	4.384
PPG519-1219	72	50	.120	.160	470	SHEAR	2938	4.213
PPG519-1220	72	52	.120	.160	442	SHEAR	2763	4.183
PPG519-1156	72	176	.120	.160	555	SHEAR	3469	5.222
PPG519-1157	72	169	.120	.160	547	SHEAR	3419	5.258
PPG519-1158	72	156	.120	.175	576	SHEAR	3291	4.746
PPG519-1159	72	147	.120	.160	513	SHEAR	3206	4.449
PPG519-1160	72	159	.120	.155	514	SHEAR	3316	4.896
PPG519-1177	-30	110	.120	.165	652	BOND	3952	1.269
PPG519-1179	-30	98	.120	.160	626	BOND	3913	0.652
PPG519-1180	-30	116	.120	.170	565	BOND	3324	0.729
PPG519-1181	-30	70	.120	.160	532	BOND	3325	0.991
PPG519-1161	190	177	.120	.160	120	SHEAR	750	4.638
PPG519-1162	190	*	.120	*	*	SHEAR	*	*
PPG519-1163	190	177	.120	.163	99	SHEAR	607	5.279
PPG519-1164	190	184	.120	.155	113	SHEAR	729	4.716
PPG519-1165	190	180	.120	.155	96	SHEAR	619	5.215

*NO DATA DUE TO INSTRUMENTATION FAILURE.

TABLE N2. SHEAR TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA					TEST CALCULATIONS DATA		
	TEST TEMP (°F)	STRAIN RATE (IN/IN/SEC)	THICKNESS (IN)	SHEAR AREA (IN ²)	MAX. LOAD (LBS)	FAILURE TYPE	RUPTURE STRESS (LBS/IN ²)	RUPTURE STRAIN (IN/IN)
SK519-1427	73	136	.120	.209	242	BOND	1160	3.978
SK519-1428	73	225	.120	.199	382	BOND	1920	4.845
SK519-1435	73	157	.120	.199	239	BOND	1200	2.436
SK519-1436	73	117	.120	.204	598	BOND	2930	4.321
SK519-1437	73	116	.120	.200	280	BOND	1400	3.090
SK519-1493	73	*	.120	.200	*	BOND	*	*
SK519-1494	73	8.0	.120	.200	92	BOND	460	1.722
SK519-1495	73	7.4	.120	.200	80	BOND	400	1.491
SK519-1496	73	7.5	.120	.200	98	BOND	490	1.488
SK519-1497	73	7.6	.120	.200	92	BOND	460	1.488
SK519-1441	190	*	.120	.200	*	SHEAR	*	*
SK519-1442	190	*	.120	.200	64	SHEAR	320	*
SK519-1443	190	214	.120	.200	78	SHEAR	390	3.037
SK519-1444	190	230	.120	.200	72	SHEAR	360	3.261
SK519-1445	190	223	.120	.200	80	SHEAR	400	2.856
SK603-1488	73	9.2	.120	1.25	481	SHEAR	385	2.721
SK603-1489	73	9.6	.120	1.25	475	SHEAR	380	2.600
SK603-1490	73	9.5	.120	1.25	475	SHEAR	380	2.456
SK603-1491	73	9.5	.120	1.25	488	SHEAR	390	2.495
SK603-1492	73	9.0	.120	1.25	463	SHEAR	370	2.450

*NO STRAIN DATA DUE TO TRANSDUCER FAILURE.

TABLE N3. SHEAR TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA						TEST CALCULATIONS DATA		
	TEST TEMP (°F)	STRAIN RATE (IN/IN/SEC)	THICKNESS (IN)	SHEAR AREA (IN ²)	MAX. LOAD (LBS)	FAILURE TYPE	RUPTURE STRESS (LBS/IN ²)	RUPTURE STRAIN (IN/IN)	
SK603-1429	73	201	.120	1.250	575	SHEAR	460	4.014	
SK603-1430	73	266	.120	1.250	563	SHEAR	450	5.918	
SK603-1431	73	188	.120	1.250	600	SHEAR	480	5.502	
SK603-1432	73	245	.120	1.250	638	SHEAR	510	5.181	
SK603-1433	73	181	.120	1.250	613	SHEAR	490	4.737	
SK603-1434	73	174	.120	1.250	588	SHEAR	470	3.508	
SK603-1447	-30	158	.120	1.250	713	SHEAR	570	3.893	
SK603-1448	-30	160	.120	1.250	750	SHEAR	600	3.525	
SK603-1449	-30	*	.120	1.250	844	SHEAR	675	*	
SK603-1450	-30	*	.120	1.250	750	SHEAR	600	*	
SK603-1451	190	210	.120	1.250	263	SHEAR	210	2.133	
SK603-1452	190	277	.120	1.250	346	SHEAR	277	2.780	
SK603-1453	190	245	.120	1.250	306	SHEAR	245	2.322	
SK603-1454	190	225	.120	1.250	281	SHEAR	225	2.218	
SK603-1455	190	255	.120	1.250	319	SHEAR	255	2.496	
SK625-1498	73	7.4	.030	.190	289	BOND	1520	3.655	
SK625-1499	73	7.3	.030	.190	266	BOND	1400	3.603	
SK625-1500	73	7.6	.030	.190	268	BOND	1410	3.014	
SK625-1501	73	7.6	.030	.190	304	BOND	1600	3.143	
SK625-1502	73	7.6	.030	.190	238	BOND	1250	2.759	

*NO STRAIN DATA DUE TO TRANSDUCER FAILURE.

TABLE N4. SHEAR TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA					TEST CALCULATIONS DATA		
	TEST TEMP (°F)	STRAIN RATE (IN/IN/SEC)	THICKNESS (IN)	SHEAR AREA (IN ²)	MAX. LOAD (LBS)	FAILURE TYPE	RUPTURE STRESS (LBS/IN ²)	RUPTURE STRAIN (IN/IN)
SK625-1456	73	560	.030	.190	348	BOND	1830	1.938
SK625-1457	73	620	.030	.185	414	BOND	2240	2.757
SK625-1458	73	360	.030	.190	466	SHEAR	2450	4.706
SK625-1459	73	260	.030	.190	355	BOND	1870	3.192
SK625-1460	73	*	.030	.185	383	BOND	2070	*
SK625-1466	-30	210	.030	.190	599	BOND	3150	2.769
SK625-1467	-30	195	.030	.190	637	BOND	3350	2.891
SK625-1468	-30	165	.030	.190	770	SHEAR	4050	3.278
SK625-1469	-30	160	.030	.190	684	BOND	3600	2.717
SK625-1470	-30	190	.030	.190	633	BOND	3330	3.019
SK625-1461	190	315	.030	.190	170	SHEAR	895	6.086
SK625-1462	190	340	.030	.185	130	BOND	700	4.761
SK625-1463	190	340	.030	.190	128	BOND	675	3.623
SK625-1464	190	315	.030	.185	172	BOND	930	5.154
SK625-1465	190	325	.030	.185	121	SHEAR	655	4.779
SWU521-1221	72	55	.120	.180	66	SHEAR	367	4.157
SWU521-1222	72	56	.120	.180	74	SHEAR	411	5.679
SWU521-1223	72	56	.120	.180	62	SHEAR	344	2.882
SWU521-1224	72	55	.120	.180	58	SHEAR	322	3.984
SWU521-1225	72	55	.120	.180	50	SHEAR	278	4.326

*NO STRAIN DATA DUE TO TRANSDUCER FAILURE.

TABLE N5. SHEAR TEST DATA

TEST SPECIMEN NUMBER	TEST MEASUREMENT DATA						TEST CALCULATIONS DATA	
	TEST TEMP (°F)	STRAIN RATE (IN/IN/SEC)	THICKNESS (IN)	SHEAR AREA (IN ²)	MAX. LOAD (LBS)	FAILURE TYPE	RUPTURE STRESS (LBS/IN ²)	RUPTURE STRAIN (IN/IN)
SWU521-1149	72	278	.120	.180	64	SHEAR	356	3.223
SWU521-1150	72	*	.120	*	*	SHEAR	*	*
SWU521-1151	72	139	.120	.180	73	SHEAR	406	3.367
SWU521-1152	72	*	.120	*	*	SHEAR	*	*
SWU521-1153	72	180	.120	.180	72	SHEAR	400	4.525
SWU521-1154	72	183	.120	.180	66	SHEAR	367	2.568
SWU521-1171	-30	203	.120	.180	95	SHEAR	528	5.982
SWU521-1172	-30	200	.120	.180	84	SHEAR	467	5.035
SWU521-1173	-30	194	.120	.180	95	SHEAR	528	5.100
SWU521-1174	-30	206	.120	.180	124	SHEAR	689	5.869
SWU521-1166	190	*	.120	.180	*	SHEAR	*	*
SWU521-1167	190	176	.120	.180	68	SHEAR	378	2.790
SWU521-1168	190	209	.120	.180	44	SHEAR	244	3.838
SWU521-1169	190	*	.120	.180	*	SHEAR	*	*
SWU521-1170	190	199	.120	.180	63	SHEAR	350	2.468

*NO DATA DUE TO INSTRUMENTATION FAILURE.